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Building an Environmental State: A Comparative Analysis of Environmental State Formation in Germany and China

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Building an Environmental State:
A Comparative Analysis of Environmental State Formation in Germany and China

An Honors Thesis
Presented By

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ABSTRACT

What are environmental states, how do they form and where can they be found? As ecosystems around the world collapse under the pressure of human activity, the role of the state is growing to include environmental protection as a key function. The concept of the environmental state has typically been applied to likely candidates in the developed world where wealth and relatively free public spheres have allowed for active environmental movements. It is increasingly clear however, that environmental degradation is disproportionately impacting states in the Global South. Because of this, it is necessary to consider whether or not environmental state formation can effectively occur in states with different economic, social and political contexts. Looking to China, a state which is infamous for problems such as air pollution, this study will show that environmental state development can take hold in such contexts. By comparing the Chinese case to that of Germany, this thesis will show that while there was no unified environmental movement in China that was able to affect significant change, similar outcomes were still reached. Specifically, underlying similarities found between the two states in regards to political legitimacy, international influences and processes of ecological modernization will provide an explanation as to why both states were able to achieve environmental state statuses despite their differences. In both cases, environmental concerns were effectively tied with the legitimacy imperative of the state which, in conjunction with developments at the international level, necessitated strong levels of ecological modernization to balance the environmental and economic goals of the states. This comparative analysis then provides useful insights into how signs of environmental state growth in other states of varying political and social contexts can be explained.

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Chapter 1: Introduction

I. Purpose and Goals of This Study

Since the onset of the industrial revolution, the relationship between humankind and the natural world has been increasingly called into question. Naturally, this has led many to consider the role of the state in regulating this often contentious relationship. Assuming that state action is necessary to counter collective action issues, states around the world (to vastly different extents) have taken up the mantle of environmental protection and, in doing so, have added another dimension to perceptions on what a state is and should be. From this, the concept of the environmental state has been developed, described broadly as a state which internalizes environmental considerations into its core functions and institutions and, as a result, devotes a significant amount of resources towards these ends.¹ Surrounding such conceptual advancements is the new study of comparative environmental politics (CEP), which comprises the, “...systematic study and comparison of environmental politics in different countries around the globe.”² The main areas of concern within this body of research can be generally identified as social mobilization / non-state actors, political institutions / governance, values / culture / knowledge, and multilevel linkages.³ These categories offer starting points for comparative analysis of environmental politics in different states. With these aspects of CEP in mind, cases which represent significant developments in environmental politics can be effectively analyzed.

Due to their impressive advancements as environmental states, Germany and China today

¹ Meadowcroft, J. (2012). Greening the State? In P. F. Steinberg, *Comparative Environmental Politics: theory, practice and prospects* (pp. 63-87). Cambridge : MIT Press .

² “Comparative Environmental Politics in a Global World.” *Comparative Environmental Politics*, by Paul F. Steinberg and Stacy D. VanDeveer, MIT Press, 2012, pp. 3–27.

³ “Bridging Archipelagos.” *Comparative Environmental Politics*, by Paul F. Steinberg and Stacy D. VanDeveer, MIT Press, 2012, pp. 29-60.

offer two unique cases through which CEP can be exercised. The former provides a developed, post-industrial Western state with a well-established history of environmental protection while the latter displays a developing nation at the peak of industrial growth with relatively new environmental initiatives. At the same time however, both have emerged as dominant economic powers in their respective region and influential actors in the growing international environmental regime. It is because of these fundamental differences and similarities that China and Germany are the foci of this thesis; the clear distinctions and subtle parallels between these two states provide an excellent opportunity to better understand the various factors that lead to environmental state growth and offer a potential blueprint for other states both developed and developing.

II. Methodology

In order to conduct a comparative analysis of environmental state development, the term “environmental state” must be clearly defined and understood. In the burgeoning field of global environmental politics, the concept of an environmental state holds many connotations and is subject to a variety of perspectives. Therefore, a review of the current literature relating to these differing conceptions will be undertaken in order to find overlap and agreement on what fundamental characteristics constitute an environmental state. Although the basic idea of an environmental state was stated earlier, such broad terms offer only a general understanding of what an environmental state really is. It is critical to not only establish the basic understanding but also to clarify the specific characteristics and qualities. What measurements or benchmarks can be used in the pursuit of identifying and explaining environmental state development? Through a survey of some of the current literature on the topic, an answer to this question will be sought.

Following this literature review, the current status of both China and Germany as environmental states will be discussed. The various characteristics highlighted in the literature review that help to define the modern environmental state will be emphasized in each of these cases. As such, the ways in which Germany and China have both shown advancements in their respective legal frameworks, legislation, and bureaucracies will be considered. From this discussion, differences between the two states in the extent to which environmental state development has been achieved will be clear. It will be shown for instance, that in many ways China can still be considered a nascent environmental state, while Germany has proven to be further down the developmental path. Despite this, it will also be obvious that while there are significant differences between the two states, both China and Germany have made great strides in expanding the scope and strength of their environmental protection initiatives and that regardless of their differences, both have produced relatively similar results in regards to the types and scope of advancements made.

The next step will be to explain why both states have succeeded in garnering environmental state statuses when they represent such different conceptions of statehood. Many would consider civil society to be an important factor in a study on environmental state development, as it seems only natural that strong environmental movements led by private citizens have been the main reasons for environmental progress within most states. This is evident, for example, in the German case where the prominence of NGO's, research institutions, and other private groups has produced an effective national environmental movement. At the same time however, it will be shown that such a movement has been absent in China, as most forms of protest are scattered and localized, and most private organizations are heavily monitored and regulated by the state. In this way, civil society has not been a critical factor in

China's path towards environmental state status. This then leads to the question that will be addressed by this thesis: given the clear lack of civil society in China, why has it been able to achieve in a relatively short period of time similar levels of environmental state development as did Germany? This also relates to the broader, more obvious differences between Germany and China in terms of their status as a free, democratic state and a repressive, authoritarian state respectively. How can similar outcomes be seen in such different political contexts? Other factors must be considered in order to explain the similarities in outcomes between these two states.

The first factor that will be studied is the underlying necessity of political legitimacy present in both Germany and China. Even though the authoritarian regime of the Communist Party in China differs greatly from the democratic regime and parliamentary system in Germany, the importance of legitimacy offers a common link between the two states. Any government, regardless of regime type, requires legitimacy in order to maintain power.⁴ Germany, as with many established democracies in the West, maintains legitimacy through its deep-seated, democratic institutions. For example, this is seen through the role of the various parties within the German political system, as they work to uphold broad public representation (and therefore public trust) in their democratic institutions.⁵ In contrast, authoritarian regimes such as China's rely more on shallow and fickle attributes such as economic growth for their political authority to remain intact. Many in fact have argued that the political strength of the Communist Party in China is fading quickly, as the unprecedented economic growth experienced by the state in the past few decades is beginning to come to its inevitable end. As a result, the current regime in

⁴ Clawson, Rosalee A., and Eric N. Waltenburg. "Legitimacy and American Democracy." *Legacy and Legitimacy: Black Americans and the Supreme Court*, Temple University Press, Philadelphia, 2009, p. 3. *JSTOR*.

⁵ Dalton, Russell J. "Chapter 8: The Party System and Electoral Politics." *Politics in Germany*. New York: HarperCollins College, 1993. 2-4. Print.

China must seek other means through which standards of living can be increased in order to preserve its political legitimacy and domestic order; in this way its attempts to improve environmental standards as a means of maintaining legitimacy, and the effects that this has had on pushing environmental state growth will be analyzed.⁶

Likewise, it is important to take into account globalization and the role of each state in an international context. Both China and Germany represent today two powerful economic and political actors on the international scale. Consequently, their engagement internationally in trade, institutions, supranational organizations, etc. has in many ways affected the extent to which they have grown domestically as environmental states. The European Union (EU), for example, is active in environmental policy making and therefore, the influence it has over member states (such as Germany) is quite noteworthy.⁷ Similarly, China's increasing integration into the global community through economic and political ties has opened it up to international pressures regarding environmental issues.

From a consideration of these two factors, we will begin to see how similarities between the two states have allowed similar outcomes to emerge. A dominant theme of these outcomes will be that of ecological modernization. Ecological modernization theory posits that sustainable economic growth and environmental protection efforts will become intertwined as green development and for this reason states will find it economically critical to pursue expanded environmental protection initiatives.⁸ As such, the theory will offer a unique lens through which the motivations behind heavy economic development, the passage of landmark legislation, and

⁶ Diamond, Larry. "The Coming Wave." *Journal of Democracy* 23.1 (2012): 10-13. Web.

⁷ Kelemen, R. Daniel. "Regulatory Federalism: EU Environmental Regulation in Comparative Perspective." *Journal of Public Policy*, vol. 20, no. 2, 2000, pp. 133-167. *JSTOR*

⁸ Fisher, Dana R., and William R. Freudenburg. "Ecological Modernization and Its Critics: Assessing the Past and Looking Toward the Future." *Society and Natural Resources* 14.8 (2001): 702-03. Web.

other important factors in environmental state formation can be considered. Kicked off by efforts to maintain legitimacy and adapt to a changing international landscape, ecological modernization will then be seen to have, on its own, provided similar incentives towards environmental state growth in both states. In this way, while acknowledging the theory's many critics, ecological modernization theory will be useful in analyzing the reasons for environmental state growth seen in both China and Germany.

Using these theories as a guide, various metrics will be looked to in order to consider their explanatory value. Starting with political legitimacy, it will first be critical to more fully establish the ways in which environmental issues have become intertwined with the legitimacy imperative. In Germany, it will be shown that the strength of the environmental movement was in part responsible for this development, while in China it will be attributed to the unique nature of the state's legitimacy. After this, policies implemented in both states that represent this new dynamic will largely be used in order to highlight the important role that legitimacy has played in their respective environmental state developments; how the policies have influenced public trust in government and institutions will be the primary considerations in this portion of the analysis. This will be accomplished through the exploration of various pathways that these policies offer through which public tensions can be eased and expectations can be met.

Following this, to underpin the analysis of international linkages and their influence on environmental state development, a variety of factors will be highlighted. For example, the requirements embedded in previously mentioned institutions and treaties must be considered in order to explain specifically how entry into such organizations as the EU or WTO has influenced the policies and structural changes that have been critical in building the German and Chinese environmental states. Likewise, international trade will similarly be highlighted in this portion of

the analysis. As with the measures used to outline the explanatory value of ecological modernization theory, the economic benefits of investing in environmental initiatives (such as green technology industries due to the expansion of foreign markets) will be considered in this section. Specifically, wind and solar technologies will be considered as these have been heavily invested in by both countries. In addition, the impacts of sanctions, wars, and general uncertainty in many oil producing regions have been shown to promote investment in green technologies, engagement in carbon markets, and the implementation of green standards into other forms of international engagement.⁹ As such, these dynamics will be a crucial element of this section.

Turning to ecological modernization, policy will again be looked to in order to determine the effectiveness of this theory in explaining the rise of the environmental state in both cases. On top of policy however, other less obvious metrics will come into play. Rhetoric for instance will be a major consideration in this analysis. In this case, government officials such as Communist Party leaders in China and elected officials in Germany will be looked to in order to clarify motivations and highlight the influence of ecological modernization. For example, in their own words, how do decision makers in China explain the motivations behind an “ecological civilization”? Questions such as these will then be related to the specific developments which have been made that have pushed forward the growth of each nation as an environmental state. In this section, it will also be seen that ecological modernization, in its ability to help link environmental and economic concerns, merges these factors together into a single process; by undergoing ecological modernization, questions of legitimacy in both states can be answered and international pressures can be met.

⁹ Jaffe, Amy Myers. "Green Giant." *Foreign Affairs*. Foreign Affairs Magazine, 07 Dec. 2018. Web.

With all this in mind, we will conclude first with a discussion on the major findings, in which this process will be explained in greater detail. Through this discussion, the possibility of similar outcomes in other developing states with currently few and/or weak environmental state characteristics will be addressed. In this way, the comparison of China and Germany will prove especially useful. As previously noted, the differences between the two states in terms of development and politics is striking and because of this, the fact that both can obtain comparable successes offers a glimpse of hope for many other nations struggling to grow in their own efforts to tackle environmental issues. It will be shown that despite the presence of stark divides, the underlying commonalities of political legitimacy, international influences, and ecological modernization can in any nation, help to produce environmental state effects. This is particularly relevant today as many other developing nations such as India and Brazil are following in the footsteps of China as they too undergo rapid industrialization and economic growth; these states are of course facing the same environmental degradation that plagues much of the world and must grow as environmental states in order to combat this threat as it worsens. By identifying the connections made between Germany and China, diverse states with different historical, societal and economic backgrounds can find common ground in their own fights to become successful environmental states with the capacities to confront issues ranging from air and water pollution to climate change.

Chapter 2: Germany and China as Environmental States

I. Literature Review: What is an Environmental State?

Framework for Environmental State Analysis

First, we must clarify what is meant by an environmental state. As mentioned in the previous section, Meadowcroft has provided the basic definition of the concept. While this definition offers a useful conceptual outline, Andreas Duit's work provides a more specific framework for comparative environmental state analysis. Moving beyond Meadowcroft's basic definition of an environmental state, Duit defines an environmental state as a state that "possesses specialised administrative, regulatory, financial and knowledge structures that mark out a distinctive sphere of state activity, while the environment and the state's role in managing social-environmental interactions has become a continuous focus of political argument and contestation".¹⁰ By breaking down the environmental state into the administrative, regulatory, financial and knowledge structures that it encompasses, Duit identifies more specific indicators of environmental state status. These allow us to point to regulatory frameworks, bureaucratic organizations, funding for environmental related initiatives and projects or organizations that works to spread environmental awareness as our main environmental state indicators. These indicators make up Duit's broader idea of an environmental governance regime (EGR), which he describes as being either established, emerging, partial, or weak.¹¹

Duit poses in the closing remarks of his study a few questions concerning questions left for further consideration. One of these is important to point out as it is especially relevant to our study. Considering why environmental states emerge, he points out that they do not necessarily

¹⁰ Duit, Andreas. "The Four Faces of the Environmental State: Environmental Governance Regimes in 28 Countries." *Environmental Politics* 25.1 (2015): 69-91. Web.

¹¹ Ibid.

correlate with other comparative state characteristics, such as type of welfare state (liberal vs. social democratic), regime type (majoritarian democracy vs. consensual democracy), or even economic structure (centrally coordinated vs. liberal market).¹² It is therefore, the purpose of this study to apply this analytical framework for environmental state comparative analysis to our cases in order to explain the similarities that exist in the face of significantly different backgrounds. In order to bolster our analysis, a more comprehensive review of the current literature relevant to the environmental state is offered below; this will help to provide more specific indicators of environmental state growth along the lines of Duit's framework.

Additional Points of Consideration

With this framework, a variety of other interpretations and applications of the environmental state concept will now be considered in order to identify other factors that can be helpful in applying Duit's framework to our analysis. For example, John Barry holds a more progressive view of what this type of state ought to be and through his writings more specific qualities can be identified. While not directly using the term environmental state, he refers to a "green republicanism" in which he explains that sustainability driven politics are the norm. This type of politics is focused on human rights, socio-economic inequalities, environmental injustices, and a cap on economic development so that it does not use resources faster than they are replenished.¹³ Barry, building off of Robyn Eckersley's work on the topic, describes a state dominated by this type of politics as "post-liberal, though not anti-liberal."¹⁴ In this way, the green republic Barry envisions is a state that has moved beyond a capitalist, carbon based

¹² Ibid.

¹³ Barry, John. "Towards a Green Republicanism: Constitutionalism, Political Economy, and the Green State." *The Good Society* 17.2 (2008): 3-11.

¹⁴ Ibid. p. 4

economy, while still upholding basic liberal tenants such as representative democracy and the rights and equality of individual citizens.

While quite useful for forward thinking scholars attempting to imagine the state of the future, these qualifications for a “green republic” are for now quite quixotic and go beyond the basic concepts of what an environmental state today truly is. If Barry’s definition were used as the primary measure of an environmental state, very few states today, if any, would qualify. The United States for example has undoubtedly reached environmental state status, yet it has in no way moved past a carbon based, capitalist driven economy and consumerism is still a dominant force that continually triumphs over considerations of sustainability. However, while this piece seems to offer more in terms of what an ideal environmental state should look like in the future, it does provide specific qualifications of environmental state status that apply currently.

For example, Barry points to a state’s constitution as a marker of environmental state development, “Given that constitutional provisions are among the most basic political structures of any society, the greening of the constitution is a potentially powerful mechanism for any transition away from unsustainability. Hence any change in the constitution in a green or sustainable direction could signal a profound shift in the political order.”¹⁵ Looking to a state’s constitution for clauses regarding environmental issues is a therefore useful means through which progress in environmental state development can be measured. This would relate to Meadowcroft in that environmental provisions in the constitution show that environmental considerations have become engrained in the core functions of the state, as the constitution of a state (as noted by Barry) is the most basic foundation of its political society.

¹⁵ Ibid.

Additionally, while discussing the nature of green politics, Barry highlights the importance of various factors such as an active citizenry, decentralized and democratized government, and a sense of justice between past present and future generations.¹⁶ Again, this analysis offers a mix of both quixotic and practical qualifications. An intergenerational sense of justice for instance is hard to measure or prove; the rhetoric of state leaders regarding various issues such as climate change could point to this, however it is not so concrete a factor that it can really aid in a more specified understanding of an environmental state. Looking for signs of an active citizenry and decentralization of environmental responsibilities is a more realistic goal.

In contrast to this idealistic, post-liberal viewpoint, Peter Christoff attempts to use ecological modernization to go beyond defining the environmental state and to clarify the various types of environmental state that have taken shape.¹⁷ We will go further into the history and meaning of ecological modernization in following chapters but for now we can simply summarize it as a process through which environmental demands are met in a way that utilizes and is compatible with market forces; as such, it has been identified as a theory that can accommodate neo-liberal values and establish a positive sum relationship between market and environmental interests through a “pollution prevention pays” dynamic.¹⁸ While processes associated with neo-liberalism often imply a weakening of the state, Christoff believes that this is not necessarily the case with environmental issues as these issues require some type of centralized state response even if that response is matched by and compatible with increasing trends towards privatization.¹⁹

¹⁶ Ibid. p. 5

¹⁷ Christoff, Peter. "Out of Chaos a Shining Star? Towards a Typology of Green States." *The State and the Global Ecological Crisis*. By John Barry and Robyn Eckersley. Cambridge, MA: MIT, 2005. N. pag. Print.

¹⁸ Hunold, Christian, and John Dryzek. "Green Political Strategy and the State: Combining Political Theory and Comparative History." *The State and the Global Ecological Crisis*. By John Barry and Robyn Eckersley. Cambridge, MA: MIT, 2005. 75-95. p. 83. Print.

¹⁹ Ibid. p. xv

Using the historical development of Australia's environmental policy as a case study, Christoff produces a typology for environmental state analysis in which environmental states can be categorized as Green States, Environmental Welfare States, Environmental Neoliberal States, or Ecofascist States; the classification depends on a few factors, most notably the state's respective level of eco-modernization.²⁰ Green States and Ecofascist states alike show strong levels of eco-modernization while Environmental Welfare and Environmental Neoliberal states are on the weaker end of the eco-modernization spectrum.²¹ While this particular typology will not be used for our study (Duit uses Christoff's work as an influence for his own framework which is more effective and relevant), it introduces ecological modernization as an important tool to analyze environmental policy developments within states especially as a possible means of comparison. Christoff's typology binds the varying types of environmental states together with ecological modernization despite all of the other differences that divide the states into their respective categories (levels of public participation, regime type, etc.).

Moving on from a more theoretical examination of the environmental state, Carl Death explores environmental state qualities currently present in often overlooked African cases. Weak domestic institutions, lack of funding and generally poor environmental conditions tend to be commonly associated with African countries and because of this, they are not usually considered in analyses of environmental state formation. Despite this however, Death argues that through international forces and historical legacies, environmental state qualities can be considered present in many African cases as environmental management practices have produced state building effects in these areas. While this is not to say that these states have achieved

²⁰ Ibid. pp. 42-43

²¹ Ibid.

environmental state status, it certainly provides a unique study through which basic environmental state characteristics can be acknowledged.

To start, Death defines an environmental state as “...states in which the governance of environmental issues has become central and is closely linked to core imperatives of survival, maintenance of domestic order, generation of finance, capital accumulation and political legitimization...”.²² Though his definition is similar to Meadowcroft’s definition in that it is based off of the assumption that environmental considerations become intertwined with the core functions of the state, it highlights a few key points that are critical in narrowing down his own analysis of African states.

For example, he explains how environmental initiatives in Africa aid in building state legitimacy. Through Death’s analysis, environmental state development does not necessarily have to be viewed as the process of states developing economically and socially before incorporating environmental concerns into their core functions; instead it can be viewed inversely, as environmental concerns (resource management, conservation, etc.) can aid in state creation before development takes hold economically, politically, etc. In the case of Africa, this is especially important as its long history of colonization disrupted the state building processes that many countries in Europe and North America experienced. Death points to various examples to support this claim, such as colonial Egypt in which colonial planners sought to improve both agricultural and waste management practices in order to create a more sustainable and productive colony. As a result of the enforcement of these initiatives, the colonial state began to establish itself, “Through the supervision of hygiene and public health, the building of model villages, the construction of networks ‘to channel and control the movement of commodities, Nile waters, and

²² Death, Carl. “Green States in Africa: beyond the Usual Suspects.” *Environmental Politics*, vol. 25, no. 1, 2015, pp. 116–135.

tourists’, the surveillance of workers and ‘the opening up of towns and cities to continuous inspection with wide thoroughfares, street lighting and police forces’, the politics of the modern state in Egypt was produced.”²³

Additionally, Death points to the importance of domestic order maintenance in environmental state analyses. In his view, environmental considerations can not only play a role in preserving domestic order but also in its initial establishment. The formation of nature preservations in African states offers an example of this. In many cases, the creation of these zones helps to define state boundaries and control internal state affairs. He notes the fact that only around a quarter of state borders in Africa are truly established as sovereign national boundaries.²⁴ Despite this, funding from international groups such as the IMF, World Bank and World Wildlife Foundation helps to enforce the establishment and protection of wildlife preserves and national parks along with the fences, gates, tourist centers and other physical boundaries that come with them.²⁵ In this way, Death claims that green state effects can be seen in Africa through the environmental initiatives that are closely intertwined with the core state imperative of establishing domestic order, as they (like in the case of these preserves) help to solidify state borders and the territory within them.

Lastly, green state qualities can be seen in African cases as environmental conservation and management practices aid in building state finances. The Kavango-Zambezi Transfrontier Conservation Area is used as an example in this case. Death explains that this area, once fully established, will be the largest conservation area in the world and will be managed by multiple states as the area would cross over state borders (this would not minimize the effect of

²³ Ibid. p. 125

²⁴ Ibid. p. 127

²⁵ Ibid.

strengthening borders mentioned in the previous paragraph as there would be restrictions on tourist movement between states within the area and would thus require closer scrutiny and monitoring of said borders).²⁶ Money is a primary motivation for this initiative as, due to its size and scope, this area would surely be a major international tourist attraction and provide a large source of revenue for the states involved.²⁷ In the context of Duit's framework, Death's idea of an environmental state fits as the state imperatives he specifies require an extensive array of financial, administrative, regulatory and knowledge structures; the cases of nature preserves points to this. Additionally, by tying environmental state development to the maintenance of political legitimacy, he clarifies a major incentive for government action in this respect which will act as the basis for one section of our study.

Like Death, Yu-wai Li, Bo Miao and Graeme Lang delve into certain case studies that show signs of environmental state development. Uniquely however, this analysis focuses on cities and provinces and seeks to point out the ways in which the emergence of the environmental state in China has impacted local areas; this is important to consider as there remains a lack of enforcement of national environmental initiatives at the local level and, as a result, China's environmental state status is not always reflected in local governance. While examples similar to this in the Chinese case will be further explored throughout this thesis, it is at this stage only important to focus on the markers this study uses to measure environmental state development at local levels.

Similarly to Meadowcroft, the definition of an environmental state used by the authors is somewhat broad, "With an intellectual origin in environmental sociology, it refers to the state's increasing involvement in managing and institutionalizing environmental tasks through state

²⁶ Ibid. p. 128

²⁷ Ibid.

policies.” ... “...institutional changes which lead to internalization of environmental values and norms in social and policy processes.”²⁸ The contribution of this study to the goal of a more operationalized environmental state definition is that it uses the standards set by the National Model City of Environmental Protection (NMCEP) to measure local level environmental state development. Adopted by the Chinese government in 1997, this model requires cities to undergo certain tests before they can achieve “model” status. First, a city must create an action plan for becoming a model environmental city and establish realistic programs for urban environmental management. Following this, the Ministry of Environmental Protection reviews the plan and then, if approved, opens up the plan for public access at which point citizens are able to voice any thoughts or concerns. After these steps are completed, the status of model city is officially granted and is held by the city so long as it passes the reassessment that takes place every three years.²⁹ The authors then focus their study on cities that have achieved model city status and consider how they went about doing so and their subsequent influences on neighboring cities.

A key takeaway from this study of provincial/city level adoption of NMCEP guidelines is that, for one thing, it points to the importance of an action plan for an environmental state. Whether it be specific goals for carbon emissions reductions or more comprehensive policies like the Obama administration’s Clean Power Plan (CPP), clear-cut plans for environmental progress are signs of environmental state formation. Additionally, this exemplifies the need for decentralization of environmental protection efforts. While there can be great strides made at the national level in building an environmental state, if these strides are not matched at the local level full environmental state status is questionable.

²⁸ Li, Yu-Wai, et al. “The Local Environmental State in China: A Study of County-Level Cities in Suzhou.” *The China Quarterly*, vol. 205, 2011, pp. 115–132.

²⁹ Ibid.

Shifting from a local level analysis to an internationally focused study, David Frank, Ann Hironaka and Evan Schofer take into consideration the creation of norms regarding environmental issues at the international level and the subsequent adoption of these norms within states; this in turn works to redefine the modern nation state and produce environmental state qualities from the top down, rather than from internal processes of development and modernization.³⁰ The authors contend that between 1900 and 1995 states took on an unprecedented amount of responsibilities in terms of protecting and managing their natural environments. Looking to the creation of large, international organizations such as the United Nations and the United Nations Environment Programme in 1945 and 1972 respectively, noticeable spikes in state activity aimed at environmental protection can be seen around these times.³¹ Additionally, they point to such phenomena as the advent of environmental impact assessment laws which, after the United States passed its own in 1969, increased in number to 50 states around the world in 1990.³² Examples such as these help to identify the role of international agenda setting in building the environmental state; in this way, IGO's and lead states throughout the 20th century have helped to craft the modern environmental state through the creation and spread of norms.

Specifically, five key indicators are highlighted to test this hypothesis, those being cumulative numbers of national parks and protected areas, chapters of international environmental nongovernmental associations, state memberships in intergovernmental environmental organizations, environmental impact assessment laws, and the creation of national environmental ministries. The authors assert that through the measurement of these factors, the

³⁰ Frank, David John, et al. "The Nation-State and the Natural Environment over the Twentieth Century." *American Sociological Review*, vol. 65, no. 1, 2000, pp. 96-116

³¹ Ibid. pp. 98-99

³² Ibid. p. 98

degree to which states have adopted environmental concerns into their core functions during the 20th century can be determined, “Taken together, the five indicators suggest an important reconstitution of the nation-state form: The nation-state has become environmentalized as a whole set of policies, once practically invisible in state organizations, now appears to be de rigueur.”³³ These indicators, in conjunction with factors mentioned in the other articles, thus help to more specifically identify and define an environmental state and its core qualities. Most importantly however, these authors add an international dimension to the conversation by highlighting the critical influence that international forces have in building the environmental state. Like the argument regarding political legitimacy, we will consider this further in following chapters as a main point of concern.

Conclusion

So what exactly is an environmental state? As explained by Meadowcroft, it is a state in which environmental concerns are included among the core functions and as a result a significant amount of resources are devoted to managing those concerns. Duit offers a more operationalized view as previously explained, through his framework composed of regulatory, administrative, financial and knowledge based structures. Additionally, a common theme among the other studies references was the devolvement of environmental concerns to local level governments. In this way, the internalization of environmental concerns that marks an environmental state must also be reflected, at least to some extent, throughout the governmental system, rather than only in the functions of the central government. Furthermore, we can look to death’s interpretation for more specificity on the idea of environmental concerns as core state functions, as he unites environmental concerns with revenue production. Taking these factors into consideration, a more

³³ Ibid. p. 97

comprehensive definition of an environmental state could be as follows: a state in which environmental concerns are included among and closely related to core state functions through administrative, regulatory, financial and knowledge based apparatus which are influential at both the national level and local level in the state.

Along with this amended definition are the specific measures pointed to in the literature. First, as explained by Barry, at the foundation of a state's political system is its constitution and because of this, clauses relating to environmental protection should be present in an environmental state, as this would be a sign of true internalization of environmental concerns. Furthermore, from the study of environmental state development at the local level in Chinese cities, the importance of an action plan for environmental progress is noted and can reflect the formation of the environmental state both at the national level and its acceptance locally throughout a country. Lastly, we can see through the work of Death and Frank ET. Al. the importance of physical landmarks such as national parks as signs of environmental state growth along with such state characteristics as environmental protection agencies, national environmental action plans and the acceptance of international environmental norms in identifying and explaining environmental state growth. By using indicators such as these and in line with Duit's environmental state framework, the establishment of new laws, bureaucratic agencies, research programs and data on government spending will be explored throughout this study. First, an overview of some of the major environmental state advancements in both states is necessary so that we will have some general context moving forward.

II. Germany as an Environmental State

Introduction

Following this analysis of an environmental state definition, the focus can now be placed

specifically on the two states of concern in this study. Between Germany and China, it is only natural to start with the German case as China's path towards environmental state development started more recently and is arguably incomplete. Germany, on the other hand, provides a more obvious example to which the amended definition and measures identified in the previous section can be applied.

Furthermore, it will be useful to conduct this application in a chronological manner. Starting from the creation of the modern German state in the post-WWII era, the internalization of environmental concerns within German institutions and society will be followed in order to highlight the successive advances that have produced the conditions seen today. This will be done by focusing on developments made in Germany's legal framework, government, and society over time. It is important to note that each of these areas overlap with one another and that a development in one may be the result of a development in another. The developments highlighted will focus on those identified in the previous section, namely constitutional and legal provisions, legislation, local and/or national action plans, and landmarks such as national parks; the effects of these qualities on state legitimacy, revenue production, and the devotion of resources by public and private groups will be considered. By highlighting these developments and the ways in which they fit into the environmental state definition, Germany's path towards environmental state status definition will be shown.

The Greening of German Law

The evolution of the German environmental state began after the Second World War when the Allied Powers began working to rebuild the local and central governments of the state. While there was previously a longstanding tradition of conservation laws in Germany regarding activities such as fishing, hunting and forest management, these laws had more

practical, economic considerations in mind and were not necessarily cases of explicit environmental protection; it was not until the post-war rebuilding period that developments in the German legal framework which allowed for environmental state development were established.³⁴

This was first seen in the creation of the new German constitution, known as the “Basic Law”. Originally drafted in 1948 by the Prime Ministers of the *Länder* in the West, this document became the law of the land for the entire German state after reunification in 1990.³⁵ As the name suggests, and as Barry mentioned in his commentary on “Green Constitutionalism”, this provides the most basic legal and political structure of a nation. As such, it is important to look to this document not necessarily to prove that Germany is in fact an environmental state, but rather to show that the fundamental legal and political structure of the state provides the capacity and lays the groundwork for such development. In this way, an inquiry into the environmental provisions (or lack thereof) embedded in a state’s constitution is a good first step in identifying environmental state characteristics.

In Germany’s case, the constitution at various points specifies environmental protection as a responsibility of the state. In 1972 for example, the government amended the constitution in order to grant the federal government the power to establish legislation regarding air pollution;³⁶ this power is seen in the section identifying concurrent legislative powers (powers that fall to the states when not exercised by the federal government). Article 74 of the Basic Law includes in its list of these powers, “24. Waste disposal, air pollution control, and noise abatement...29.

³⁴ Neumann, Monika T. "The Environmental Law System of the Federal Republic of Germany," *Annual Survey of International & Comparative Law*, Vol. 3(1) Article 6, 1996, p. 70

³⁵ *Ibid.* 72

³⁶ Currie, David P. “Air Pollution Control in West Germany.” *The University of Chicago Law Review*, vol. 49, no. 2, 1982, p. 355. *JSTOR*

Protection of nature and landscape management...” along with other measures such as oversight of water resources.³⁷ These powers are included with other measures such as public welfare and therefore show the development of environmental protection as basic social responsibilities (like public welfare) and more than simply practical considerations of resource management. While the inclusion of such clauses into the national constitution on their own do not qualify Germany as an environmental state, however, as previously stated, it shows the rise of environmental considerations at the most fundamental level of state politics and law.

On top of the constitutional provisions which worked to embed environmentalism in German law, the legal system itself and the expanded opportunities for environmentally focused public interest litigation reflects the growth of Germany as an environmental state. While the 1970's saw an increase in environmental activism amongst the people and awareness within the government, enforcement of legislation was still inadequate. In an attempt to strengthen the public's role as a watchdog, the government opened up access to the courts. Previously, it was nearly impossible to obtain legal standing to sue for violations of environmental law on behalf of the public as it was often unclear whether or not there was a direct injury against the Plaintiff. Looking to the legal system in the United States for inspiration, Germany updated its own by easing the qualifications for legal standing in representing the public interest to certain, approved associations; while a step forward, this was still more restrictive than the American system as it gave the government greater discretion over which groups this applied to and which legal actions could be pursued. However, in order to further expand access to the courts, Germany passed in 2006 the Environment Action Act (*Umwelt-Rechtsbehelfsgesetz*), which allowed associations to, in certain circumstances, defend specific individuals whose rights have been violated by any

³⁷ Bundesministerium Der Justiz Und Für Verbraucherschutz. "Basic Law for the Federal Republic of Germany." Web.

insufficient protections of the environment, as beforehand legal actions were limited to defending the public environmental interest in general.³⁸ Such changes to German law exemplify the growing importance of the environment in increasing domestic order through the creation of legal outlets to pursue environmental justice.

The Greening of German Government

Overlapping with the internalization of environmental considerations in German laws is the development of this phenomenon in Germany's government and bureaucracy. Between 1970 and today, much progress in this regard has been made. Looking to Germany's government as a whole for example, the major parties today offer little disagreement on the fundamental importance of environmental protection and conservation, representing a general acceptance of the inclusion of the environment into the core functions of the state.³⁹ This acceptance is reflected throughout the various governance levels and bodies within the state.

Looking back to the 1960's and 70's, Germany lacked both comprehensive environmental regulations and strong bureaucratic structures to enforce them.⁴⁰ This began to change in the early 1970's with the creation of the Environmental Expert Council (Sachverständigenrat für Umweltfragen – SRU) in 1972 and the Federal Environmental Agency (*Umweltbundesamt* – UBA) in 1974. Both the UBA and the SRU were founded in order to aid the government with scientific and policy advice. Additionally, this trend continued in 1986 when the Federal Ministry of the Environment (*Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit* – BMU) was established, largely taking over the role of the Interior Ministry

³⁸ Kellner, Martin. "Citizen Participation in Environmental Law Enforcement in Nicaragua: A Comparative Study of Nicaraguan, United States and German Environmental Law." *Verfassung Und Recht in Übersee / Law and Politics in Africa, Asia and Latin America*, vol. 42, no. 3, 2009, pp. 385–398. JSTOR

³⁹ Kraemer, Andreas. "The Ecologic Institute and Its Influence on Policies in Germany and the EU." *How Think Tanks Shape Social Development Policies*. By James G. McGann, Anna Viden, and Jillian Rafferty. Philadelphia: U of Pennsylvania, 2014. 134. Web.

⁴⁰ Ibid. p. 135

which had been overseeing the enforcement of environmental policy, offering a larger number of employed scientists and greater expertise.⁴¹

Bureaucratic growth has also been seen at the local level in Germany. Germany is similar to the United States in that it maintains a federalist system with certain powers relegated to the states. In this way, the states have also played an important role in the creation of various bodies aimed at aiding the implementation of environmental protection initiatives; the state of North Rhine-Westphalia (NRW) offers an excellent example of this. For example, the state created an energy agency (*Energieagentur*) in order to aid the state and local utilities with scientific advice and technological support.⁴² The development of agencies such as these at both the national and regional level offers concrete manifestations of the increase in resources being devoted to environmental issues in Germany, and shows that the internalization of environmental protection as a key government function has occurred in Germany not only at the top but in the local governments as well.

These advances in bureaucratic structure have been matched politically, as the rise of the Green Party and the increase in environmental awareness among the other major parties have taken hold. The Green Party for instance rose to national significance in 1983 when it achieved representation in Parliament after significant environmental issues such as acid rain mobilized the German population in support for Green candidates. As will be discussed in greater detail later, the rise of the Green Party in Germany subsequently forced the more mainstream CDU and SPD to take stronger stances on environmental protection, as was seen by the passage of

⁴¹ Wurzel, Rüdiger K.W., Andrew Jordan, Anthony R. Zito & Lars Brückner. "From High Regulatory State to Social and Ecological Market Economy? New Environmental Policy Instruments in Germany", *Environmental Politics*, 12:1, 2003, p. 118

⁴² DeAngelo, Benjamin & Harvey, Danny. "The jurisdictional framework for municipal action to reduce greenhouse gas emissions: Case studies from Canada, the USA and Germany", *Local Environment*, 3, 111-136, 1998, p. 123

landmark legislation such as the Large Combustion Plant Directive of 1983 during Helmut Kohl's conservative leadership.⁴³

As such, Germany has surpassed many states in the scope and effectiveness of its environmental protection legislation. German legislation regarding stationary air pollution control for example, is considered to be some of the strongest examples of such legislation in the world.⁴⁴ The passage of the Federal Emissions Control Act (*Bundes-Immissionsschutzgesetz*) in 1974 required that any facilities producing emissions which had the potential to produce negative environmental effects must obtain a permit. The law identifies almost 100 emissions that, if produced by a facility, would require a permit to be obtained. With such a permit, the amount of emissions produced as well as the disposal of any harmful wastes is heavily regulated; while measures such as these are similar to those found in other states such as the US, Germany's go further in their designation of disposal methods for related industrial wastes, along with the scope of air pollutants that it covers under the emissions guidelines for permitted firms.⁴⁵

Furthermore, Germany typically has tended more towards command and control legislation than other states such as the UK, which often opt more for voluntary agreements. This was especially seen in the development of its regulatory framework regarding pesticides. The first of such legislation came in 1968 with the Pesticide Act, followed by its amended version in 1986 with the Plant Protection Act, in addition to a plethora of other laws that were passed including the 1972 Act on DDT and the Toxic Substances Control Act of 1980.⁴⁶ At the same time, these command and control regulations have been accompanied by voluntary programs

⁴³ Schreurs, Miranda "Divergent Paths: Environmental Policy in Germany, the United States, and Japan" *Environment: Science and Policy for Sustainable Development*, 45:8, 2003, pp. 11-12

⁴⁴ Porter, Michael. "America's Green Strategy." *Business and the Environment: a Reader*, by Richard Starkey and Richard Welford, Taylor & Francis, 1996.

⁴⁵ Currie, pp. 355-393

⁴⁶ Moosbrugger, Lorelei K. "GERMANY: THE POLITICS OF PAYING THE POLLUTER." *The Vulnerability Thesis: Interest Group Influence and Institutional Design*, Yale University Press, 2012, Web.

issued by the *Länder*. These agri-environmental schemes offer funding and incentives for farmers who agree to comply to certain standards; 91 of the 104 voluntary agri-environmental scheme programs present in Germany by 1992 were primarily concerned with environmental protection and set their standards accordingly.⁴⁷ This offers yet another example of the varying levels of governance relevant to the German environmental state.

However, as mentioned earlier, the federal government in Germany is constitutionally able to exercise at times more direct control over its local municipalities than in, for example, the United States. Therefore, the dynamic between the federal government and the states in Germany is clearly a give and take of both regional autonomy and federal oversight rather than a straightforward system of broad objectives established at the top and a veritable free for all by the states in their individual pursuits of these objectives. In this way, it has been able to issue strong federal guidelines that must be followed at the local level. These are seen in the Building Law Book (*Baugesetzbuch*—BauGB) and the Building Use Ordinance (*Baunutzungsverordnung*—BauNVO), which specify various standards for the municipalities in their local planning initiatives. These regulations outline various requirements set forth by the federal government for city planning policies created by the municipalities; in addition to specific rules regarding how land is used, they require that local governments must take the effects on climate change into consideration in their city planning activities.⁴⁸

Additionally, the permeation of policy advancements made at the national level down to the local *Länder* level in Germany can be seen through the adoption of Agenda 21. The formation of Agenda 21 at the Rio Earth Summit in the early 1990's brought with it the push for not only national action plans regarding sustainable development but also the establishment of

⁴⁷ Ibid. 103

⁴⁸ DeAngelo, p. 127-128

local initiatives. Through the diffusion of Agenda 21 throughout the German states, environmental state development can be seen to have become prevalent throughout the country, rather than having remained superficially pursued at the top. For example, by 2006 2,610 local authorities had established commitments to implementing their own A21 plans. While some *Länder* were less ambitious than others, Hesse, Saarland and NRW were able to boast that over 60% of their local authorities had committed to A21 resolutions.

These efforts pulled a significant amount of financial and human resources; in Berlin alone €600,000 every year went towards 48 “coordinators” throughout the city to oversee the implementation of the development plans. While this number was eventually cut, a central Agenda Office was maintained with staff to oversee these operations, along with a Public Working Group and Agenda Forum in order to ensure communication between the boroughs of the city.⁴⁹ The diffusion of Agenda 21, in addition to the other examples of policy implementation mentioned in this section, show the spread of financial commitment and government attention throughout the German state rather than only at the top. This exemplifies the qualities of an environmental state as the characteristics must be reflected throughout the political society of a country, both locally and nationally.

Conclusion

While these developments surely do not provide an all-encompassing account of Germany’s path towards environmental state status, they are meant to highlight the general trend that has been exhibited from the post-WWII decades into the 21st century. Specifically, what these developments show is that environmental concerns have become intertwined in Germany with core state functions and that this trend has been occurred not only at the national level but

⁴⁹ Kern, Kristine, Claudia Koll & Malte Schophaus. “The diffusion of Local Agenda 21 in Germany: Comparing the German federal states”, *Environmental Politics*, 16:4, 2007, pp. 604-624, Web.

has also been reflected in the state governments and the general population. For instance, the greening of the Basic Law shows acceptance of environmental protection as a primary responsibility of the state. While only a basic step forward, the creation of the various bureaucratic bodies mentioned offer more concrete manifestations of the increased attention and resources devoted to the environment at the national level.

The rise of the Green Party and its influence on the other major parties adds to this, as it sheds light on the growing relationship between the environmental movement and government legitimacy, as the conservative leadership at the time felt obligated to take relatively strong environmental stances in order to maintain power. Likewise, the local action plans adopted under Agenda 21 exemplify this trend at the local levels. As such, Germany can be considered an established environmental state, with its long history of environmental initiatives and the relatively successful implementation of these initiatives throughout the state.

III. China as an Environmental State

Introduction

Coming off the German case, it is clear that for a country to build up the capacity, institutions and social awareness necessary to achieve environmental state status it takes a considerable amount of time and resources. As such, China offers an interesting follow up, given its relatively recent rise in economic and political power. Much of the environmental progress it has made has come only recently and certainly has not yet solved the many environmental challenges currently facing the state; overpopulation, its reliance on manufacturing, and the impending effects of climate change all still loom over China, as it struggles to maintain a balance between modernization and environmental degradation. This then leads to the question: to what extent has China experienced the growth of environmental considerations in its

regulatory framework, bureaucracy, and financial commitments? While it is obvious that the state has shifted much of its attention towards combating its extensive environmental issues, it is less clear whether or not this has resulted in the fundamental changes that differentiate between environmental states and non-environmental states.

China is, according to some, only a nascent environmental state, as their many recent environmental initiatives still struggle with implementation and compliance.⁵⁰ These weaknesses are important to consider, especially in relation to Germany, where the internalization of environmentalism was seen to permeate all levels of society, instead of simply rest at the top. At the same time however, China has considerably increased its devotion of state funds towards environmental protection; by 2014, the government had committed 277 billion dollars to fight air pollution and 333 billion dollars to fight water pollution and now spends more than any other country on renewable energy development (as we will see in following chapters).⁵¹ Such funding implies an expansion of the government's capacity to administer and oversee these initiatives. Therefore, as was done with Germany, some of the more significant changes made by the Chinese government to increase its own legal and administrative capacities in order to effectively build its environmental protection apparatus will be described.

The Greening of Chinese Law

As with Germany, China's path toward environmental state status can be seen first in its constitutional and legal frameworks, as these provide the governmental and societal capacities required to successfully push for increased attention and resources towards environmental protection. It is because of this that a brief overview of the environmental provisions present in

⁵⁰ Li, "The Local Environmental State in China", p .118

⁵¹ Gardner, Daniel K. "China's Environmental Awakening." *The New York Times*, The New York Times, 14 Sept. 2014, www.nytimes.com/2014/09/15/opinion/chinas-environmental-awakening.html

the Chinese constitution and the inclusion of environmental considerations within Chinese law is warranted. Beginning with the constitutional provisions, 1978 saw changes made to the constitution that included references to environmental concern.⁵² These concerns can be seen in Article 26 of the General Principles, which states, “The state protects and improves the living environment and the ecological environment, and prevents and controls pollution and other public hazards. The state organizes and encourages afforestation and the protection of forests.” As with the German case, what these developments represent is the foundation of China’s legal capacity to act on the environment and an acceleration in the efforts of the state to tackle its mounting environmental issues.⁵³

Furthermore, as in Germany’s, there have been many developments in China’s legal system which have aided in increasing the importance of environmental protection in China. For example, between 2007 and 2013, 130 environmental courts were established throughout the nation; these courts work to provide the public with an outlet through which environmental disputes can be resolved. Courts in general help to strengthen state legitimacy through their ability to reduce tensions and provide redress.⁵⁴ On top of this advancement, public interest litigation related to environmental issues became permitted by the central government in 2015.⁵⁵ Through developments such as these, the expansion of the legal system within China to accommodate the growth of environmental considerations within society has provided a necessary foundation for environmental state growth. On top of this, these changes to Chinese

⁵² Hess, Steve. "Environmental Protest and the Greening of the State." *Problems of Post-Communism* 58.2 (2011): 49.

⁵³ Palmer, Michael. "Environmental Regulation in the People's Republic of China: The Face of Domestic Law." *The China Quarterly* 156 (1998): 788. Web.

⁵⁴ Stern, Rachel E. "The Political Logic of China’s New Environmental Courts." *The China Journal*, no. 72, 2014, p. 54, *JSTOR*

⁵⁵ Shapiro, Judith. "State-led Environmentalism: The View from Above." *China's Environmental Challenges*. N.p.: Wiley, 2016. p. 69. Print.

law highlight the growing ties between environmental protection, domestic order, and government legitimacy, which are key aspects of the environmental state definition.

The Greening of Chinese Government

The Chinese government has likewise, taken many steps towards improving its bureaucratic and legislative capacity for environmental protection. While it was relatively late to the game in this respect, it has devoted in the past few decades many resources towards expanding its bureaucracy and increasing the strength of its environmental policies. The intentions of the government to catch up with other modern nations in their environmental standards was seen clearly in 2003 when then President Hu Jintao announced that environmental protection would be on par with economic development for the Chinese government moving forward.⁵⁶ On top of the increased rhetoric by Communist Party officials emphasizing the growing importance of environmental protection in state activities, environmental considerations have clearly started to take on central positions in the Communist Party's various plans for development and modernization. This was seen recently in 2015 when the CPC released an "ecological reform plan", which was specifically crafted in order to comprehensively improve the systems for ecological restoration and conservation that were at that time in place. This reform plan included such provisions as the official protection of virgin forests, grasslands and wetlands, under which protection any unauthorized uses of such lands would be banned. In addition to these protections, the plan highlighted key goals revolving around increasing revenue production from public land use, as it explains that pricing for the use of public lands will increase in order to reduce the percentage of public lands being utilized for industrial purposes; likewise, the plans targets increases in the scope of taxation for resource extraction and use in

⁵⁶ Tracy, Elena F., Evgeny Shvarts, Eugene Simonov, and Mikhail Babenko. "China's New Eurasian Ambitions: The Environmental Risks of the Silk Road Economic Belt." *Eurasian Geography and Economics* 58.1 (2017): 56-88.

order to increase regulation of various industries and improve revenue streams.⁵⁷ The inclusion of environmental protection into the developmental action plans of the Chinese central government goes back much further however, as seen in the five-year action plans which highlight the main developmental goals and policies the PRC wishes to pursue moving forward.⁵⁸

There have been, between 1953 and 2015, twelve five-year plans; an analysis of each of the plans shows the trend of the growth of environmental considerations within the central government in China. The first five five-years plans (1953-1980) were focused on establishing minimum energy production goals through increasing the availability of such resources as coal and oil however, by the sixth five-year plan (1981- present), energy efficiency and a reduction in energy usage per unit of production became primary goals of the plans; the environmental considerations within the plans were advanced with the eleventh-five year plan and the plans afterwards (2006-present) in which targets of sulfur dioxide and carbon dioxide emissions became prevalent along with an increased focus on the development of renewable energy production. For example, the twelfth five-year plan called for a 17% reduction of carbon dioxide emissions per unit of GDP, and a goal of 11.4% and 20% of total energy consumption being from renewable sources by 2015 and 2020 respectively. Goals such as these in recent five-year plans represent the increased importance of environmental protection and its now equal footing with other state mandates like economic growth and social stability which previously dominated the focus of the plans.⁵⁹

⁵⁷ China. Communist Party of China Central Committee and the State Council. *Integrated Reform Plan for Promoting Ecological Progress*. N.p., 2015. Web.

⁵⁸ Yuan, Xueliang, and Jian Zuo. "Transition to Low Carbon Energy Policies in China—from the Five-Year Plan Perspective." *Energy Policy* 39.6 (2011): 855-859. Web.

⁵⁹ Ibid.

The heightened environmentalism witnessed within the rhetoric and action plans of the central government of China can also be seen within the bureaucratic growth China has achieved. This process was first seen in the 1970's at the national level with the creation of the Environmental Protection Office (EPO). While China attempted to follow other nations in establishing an organization within the central government focused on environmental protection, their version lacked any real power or resources, as was seen by its inability to issue any direct orders to lower level bureaucratic organizations. The actual expansion of bureaucracy was not seen until 1979 as local environmental agencies were granted more power; this eventually resulted in the creation of the State Environmental Protection Agency (SEPA)⁶⁰ in 1998 and the upgrade of this organization to the cabinet level in 2008, officially becoming the Ministry of Environmental Protection (MEP).⁶¹ The growth in environmental bureaucracy in China as a whole can also be seen through the size of its staff, which has grown considerably since the early 1990's. In 1995 for example, environmental bureaucracy in China was comprised of a staff of 88,000 people, while by 2004 over 160,000 were employed.⁶² This growth extended down to the provincial level, as sub-provincial environmental protection bureaus (EPB's) have been established in an effort to ensure compliance with the national policies. It is through the weakness of these EPB's however, that a key problem in China's environmental protection efforts can be identified; the sub-provincial EPB's generally lack much power and have a hard time countering the local governments, which are focused mainly on economic development and lack the environmental consciousness of the central government.⁶³ This complicates China's rise

⁶⁰ Hess, p. 49.

⁶¹ Shapiro, p. 68

⁶² Mol, Arthur P. J. & Neil T. Carter. "China's environmental governance in transition." *Environmental Politics*, 15:02, (2006): 152

⁶³ Li, p. 118

as an environmental state, as it shows that the changes made at the top are not always reflected throughout the state.

Naturally leading from the development of environmental bureaucracy is the implementation of policy. For the most part, China has offered a much more top-down approach to environmental state building than was seen in Germany. Its environmental initiatives have been described as heavy handed and ignorant of social ramifications; the forced relocation of ethnic minorities in the grasslands of Tibet in order to stop land degradation caused by herding offers a perfect example of this as the Chinese government has relocated countless people in the name of ecological restoration.⁶⁴ As with the bureaucracy, the growth of environmental policy largely came in 1979 with the establishment of the Environmental Protection Law of the People's Republic of China, which sought in many ways to work environmental protection into the role of agencies such as the Ministry of Construction, and embedded some of the first environmental requirements into the economic growth of the state as it introduced environmental impact assessments, pollution discharge fees, and the requirement that pollution control measures be intertwined with the design, construction and operation phases of any development projects. This was followed by the Environmental Impact Assessment Law in 2004 which requires developers to receive permission from the MEP before beginning any new projects. Significant changes were also made to the environmental protection laws in 2015 which establish various improvements to the old legislation including the requirement that projects be more closely tied in with environmental protection efforts and the establishment of stronger financial penalties for violators.⁶⁵

⁶⁴ Shapiro, p. 59

⁶⁵ Ibid. pp. 68-69

Much more can be written on the efforts of the central government in China to improve its record on environmental protection. It is true that the divide between the central and local governments has limited the progress that could have been achieved. Despite this, the vast expansion of China's environmental bureaucracy and policy, along with the newfound presence of environmental concerns in national development plans and CPC rhetoric provide concrete examples of qualities mentioned in the environmental state definition; the internalization of environmental issues within government functions, along with the rise of environmental protection to become intertwined with such key state responsibilities as revenue production have been highlighted in these governmental advances.

Conclusion

From this analysis, the idea of a weak or emerging environmental state seems to best describe the case of China. While China has in many ways showcased the same results as Germany in terms of its legislative and bureaucratic advancements, these have largely been led by the central government's top down approach to environmental progress. The increased devotion of government resources towards environmental considerations, as manifested in these policy initiatives and bureaucratic expansion, shows the rise of environmental protection as a core state function. Likewise, the rise of environmental issues within the various development plans published by the central government highlights the same trend in the greening of the Chinese state.

At the same time, as explained in our environmental state definition, this trend must be reflected throughout society, rather than only at the top. Despite the promising advancements made by the Chinese government, implementation and compliance at local levels still plague the many environmental initiatives that have been attempted. While this offers a sobering view of

China's environmental state, I would argue that it is still an environmental state nonetheless, due to the previously mentioned advances. China has built up a significant legal and administrative capacity and is increasingly investing more and more state funds towards environmental issues. With this established, it is now important to consider the overarching question: why? Why has China been able to match Germany in achieving this status when, on the surface, the state differs so significantly?

Chapter 3: Civil Society as a Casual Factor

I. Introduction

With our understanding of an environmental state established and our overview of Germany and China in the context of this concept complete, we must now move on to address the main questions of this thesis. Specifically, why have both achieved relatively similar results? In order to answer this question, we will compare major themes important to each state in order to identify any overlap and underlying similarities that have caused the same processes to occur and outcomes to be achieved. To start this comparison, it is important to consider the strength and effectiveness of civil society. Common notions of the environmental state point to its origins in civil society. The narrative is often that rising standards of living lead to the growth of environmental considerations among the public, and that this then produces a bottom-up, grassroots process through which political and economic advancements result in the environmental state. Due to the history of the environmental movement in the United States, this belief is not surprising. With the release of Rachel Carson's "*Silent Spring*", a rise in public support for a government response to environmental issues took hold and many have pointed this as the origin of modern American environmental policy. As the book produced a passionate and engaged populace and as activists such as Carson herself testified before Congress, a strengthened civil society produced a strengthened regulatory and administrative advancements to deal with such issues as pesticide use.⁶⁶

As such, the rise of an environmentally conscious civil society seems to be the first point that we should consider in this study. Through our comparison, we will attempt to show whether or not similar processes have occurred in both Germany and China. To do so, the current state of

⁶⁶ Griswold, Eliza. "How 'Silent Spring' Ignited the Environmental Movement." *The New York Times*. The New York Times, 21 Sept. 2012. Web. 29 Mar. 2019.

each nation's environmental civil society will be described along with any influence that they may have had on domestic environmental advancements. Following these overviews, the implications of this chapter's findings for the remainder of this thesis will be considered by highlighting any key differences and / or similarities found between the roles that civil society has been able to play in each state. Through this analysis, we will show that while civil society has been allowed to grow in Germany, the repressive nature of the Chinese state has prevented such an outcome within Chinese society. As the main finding of this chapter, this fundamental difference will help to augment the research questions of this thesis and frame the argument moving forward.

II. Environmentalism in German Society

An Environmental Movement in Germany

Traditionally, there has been a strong history of environmental stewardship and an emphasis on sustainable practices in Germany, especially in regards to forest management and conservation practices.⁶⁷ Despite this, it was not until the 1970's that much of the progress Germany has made in truly internalizing environmental concerns within its population has been seen. Prior to this time, concern for environmental issues was quite weak, however, the advent of issues such as nuclear power and acid rain, along with the manifestation of their potential consequences in Chernobyl and forest damage respectively, mobilized portions of the population that had not previously been engaged.⁶⁸

As a result of the heightened awareness, the rise of political groups such as the Green Party was also reflected within civil society as a variety of different activist organizations began

⁶⁷ Radkau, Joachim. "Germany as a Focus of European 'Particularities' in Environmental History." *Germany's Nature: Cultural Landscapes and Environmental History*, edited by THOMAS LEKAN and THOMAS ZELLER, Rutgers University Press, New Brunswick, New Jersey; London, 2005, pp. 17–32

⁶⁸ Schruers, p. 11

to form. In contrast to states like Japan, the development of these organizations and the onset of environmental activism in general in Germany took on a national importance that went beyond regional and local movements, as groups such as NGO's grew in national membership, resources, and influence. German groups such as the Climate Alliance (Klimabündnis), along with German chapters of international groups like Greenpeace boasted relatively high levels of membership, staff and income, at least compared to Japan and other states where NGO's are less important actors in the decision making processes regarding state functions such as policy creation. By 2002 for example, Greenpeace had 510,000 members in Germany while the Climate Alliance had 450 (though seemingly small, the Climate Alliance is a local NGO without the international recognition of Greenpeace). Additionally, Greenpeace and the Climate Alliance maintained 120 and 14 staff members respectively and annual incomes of 32.9 million and 1 million euros. Due partially to these resources and their position within an environmental movement national in scope, NGO's in Germany enjoy an influential seat in the policy making process.⁶⁹

Likewise, Germany maintains a strong body of independent research organizations meant to bolster the national environmental movement. An example of this was seen through the creation of research groups such as the Öko-Institut in 1977. Groups such as these worked to provide expertise to other organizations regarding environmental science and law. Their efforts were augmented by the creation of the Working Coalition of Institutes of Ecological Research (*Arbeitsgemeinschaft ökologischer Forschungsinstitute* – AGÖF) in 1986 which helped bring these types of groups together in order to better coordinate their efforts at the national level.⁷⁰

⁶⁹ Foljanty-Jost, Gesine. "NGOs in Environmental Networks in Germany and Japan: The Question of Power and Influence." *Social Science Japan Journal*, vol. 8, no. 1, 2005, p. 106-108. *JSTOR*

⁷⁰ Rucht, Dieter and Jochen Roose "The German environmental movement at a crossroads?", *Environmental Politics*, 8:1, 1999, pp. 59-80

The Öko-Institut and the umbrella organization of the AGÖF represent in Germany a thriving body of research institutes which work independent of government units and interest groups. Making the comparison again to Japan, where research institutes and think-tanks are often closely intertwined with the government and only work to augment the positions already held by bureaucratic agencies, Germany offers a more robust mix of environmental groups as seen by the strength of its independent research bodies.⁷¹ These types of groups underwent significant growth in the 1980's. Looking to the more medium sized groups such as the Öko-Institut for example, significant membership increases between 1985 and 1993 represent the development of a more active civil society. The Öko-Institut saw a 20% increase in membership during this timeframe while another group, the Verkehrsclub Deutschland (which did not exist in 1985) increased its membership from 31,000 in 1989 to 63,000 in 1992.⁷² The growth and influence of research groups and NGO's such as these in Germany highlights the growing devotion of resources made by the public to environmental organizations and a growth in environmental consciousness within civil society.

On top of this growth, the general perceptions of the German population as a whole regarding the environment is important to consider. Using Eurobarometer data, it can be seen that environmental considerations have truly embedded themselves within the populace. For example, data published in 2017 shows that a vast majority of Germans consider environmental protection as either "very important" (54%) or "fairly important" (40%) to them personally. Furthermore, going back to 2002, 56% of people believed that their individual actions could make a difference in the protection of the environment;⁷³ while remaining relatively stable, this

⁷¹ Foljanty-Jost, p. 105-106

⁷² Rucht, p. 66

⁷³ *Eurobarometer 58.0: The Attitudes of Europeans Towards the Environment*. Rep. N.p.: EUROPEAN OPINION RESEARCH GROUP (EORG), 2002. Web.

number increased to 58% in 2017. The 2017 data also showed that 86% of Germans are worried about the impact of plastic goods on the environment, as compared to only 13% that do not worry.⁷⁴ Data such as these show a widespread acceptance amongst German people of the importance of environmental protection along with at least a general understanding of the current issues at hand.

The trend of greater environmental consciousness in German society also manifested itself in the creation of national parks. Prior to the establishment of national parks, West Germany sought to meet the increasing demands of its citizens for more access to natural spaces and public open areas. This started with the nature park program in West Germany which worked to establish 26 parks across the country by 1963; this number increased to 53 by 1970 and expanded to cover almost 15% of land area in West Germany.⁷⁵ Conservationist movements continued to grow however, and pressures from notable public figures such as Bernhard Grzimek (well known for his work in both conservation and television) eventually led to the establishment of the country's first national park in the Bavarian Forest in 1970. Despite opposition to the establishment of the park, the promise of increased tourism and the subsequent revenue and jobs that it would produce aided in its eventual acceptance.⁷⁶ Since then, 15 more national parks have been established around the country, including two recently in 2014 and 2015; in total these parks cover about 1047859 hectares of land.⁷⁷ Looking back to the environmental state definition, the increased importance of environmental protection in such government functions as revenue production can clearly be seen in this case, along with the general internalization of

⁷⁴ *Special Eurobarometer 468: Attitudes of European Citizens Towards the Environment*. Rep. N.p.: EUROPEAN OPINION RESEARCH GROUP (EORG), 2017, Web.

⁷⁵ Chaney, Sandra. "Protecting Nature in a Divided Nation: Conservation in the Two Germanys, 1945–1972." *Germany's Nature: Cultural Landscapes and Environmental History*, edited by THOMAS LEKAN and THOMAS ZELLER, Rutgers University Press, New Brunswick, New Jersey; London, 2005, p. 216. *JSTOR*

⁷⁶ *Ibid.* pp. 218-219

⁷⁷ German Federal Agency for Nature Conservation (BfN), "National Parks." *BfN: Land Use in Germany*. n.d. Web.

environmental issues within society, as seen through the growth and effectiveness of the conservation movement.

Civil Society as a Causal Factor

As we have seen, environmentalism in German society is thriving. Social movements against such issues as nuclear power and acid rain have led to the rise of many organizations and the German population as a whole has embraced environmental protection as a key issue. In order to understand the effects that this has had on the German environmental state, we must first analyze the political opportunity structure under which the movement has operated. To do this, the nature of state policy making and its attitude towards civil society (accommodating, supportive, repressive, etc.) along with resource availability of movement organizations will be covered.

Starting with the state, Germany has been historically friendly towards its environmental movement. Looking to the previous section, it is quite clear that there have been countless opportunities for organizations to form and for the movement to develop national momentum. At the same time however, Susan Rose-Ackerman points out that the environmental policy making process in Germany has historically been closed to environmental groups.⁷⁸ In this way, Germany can be considered a passive exclusive state, as it has generally left civil society alone in its efforts to form and organize but has typically relied on a technocratic bureaucracy to form the government's agenda.⁷⁹ The implications of this are quite significant in regards to the relationship between civil society and the environmental state in this case as strength of civil

⁷⁸ Rose-Ackerman, Susan. "Democratic Government and Policy Implementation." *Controlling Environmental Policy: The Limits of Public Law in Germany and the United States*. New Haven, CT: Yale UP, 1995. 7-17. Print.

⁷⁹ Hunold, pp. 86-88

society in regards to environmental issues could not be exercised directly through actions like lobbying, as is the case in more inclusive state structures.

Adding to this is a relative lack of resources. While it is true that funding from the state helped to grow many of these environmental groups and help citizens organize at a national level, the actual financial and technical capacity of environmental organizations in Germany does not come close to that of similar groups in the United States.⁸⁰ For example, it was previously mentioned that the Climate Alliance in Germany had an annual income of about 1 million euros. Compare this to large American NGO's such as the Nature Conservancy and the Wetlands America Trust which had incomes of 972,368,622 and 17,171,656 dollars respectively in 2003.⁸¹ Because of this, it has been quite difficult for citizen environmental organizations in Germany to break into the policy creation process in Germany and truly become influential drivers of environmental state growth.⁸²

To be clear, these points are not to discount the strength of civil society in Germany and its influence as a factor in this study. Instead, this context must be given so that, by understanding the challenges and opportunities that civil society in Germany has faced, the path it has taken in affecting change can be accurately described. Specifically, it is because of these obstacles that the environmental movement in Germany sought to gain influence by entering government as a political party so that they could work from the inside and put electoral pressure on the other parties to green their own platforms.⁸³ The next chapter will explore this process in greater detail. Furthermore, it is important to note that even after the inclusion of the Green Party

⁸⁰ Rose-Ackerman, p. 11

⁸¹ Brulle, Robert J. "U.S. Environmental Movements." *Twenty Lessons in Environmental Sociology*. By Kenneth Alan Gould and Tammy L. Lewis. New York: Oxford UP, 2015. 263-82. p. 278. Print.

⁸² Ibid.

⁸³ Hunold, p. 87

into German government, an oppositional public sphere remained. This was due to the fact that the Green Party became more moderate as it sought to increase its influence in government while the state still remained closed to activist input.⁸⁴ Again, the influence of this will be covered in following chapters as its relationship with ecological modernization comes into play.

III. The Greening of Chinese Society

An Emerging Environmental Movement in China

Civil society in China has historically been weak, divided, and ineffective. Unlike in Germany, where issues such as nuclear power galvanized national support for a unified environmental movement, the nature of China's population and government have confined environmental protest and activism from achieving such unity. It is important to understand however, that in recent decades civil society in China has grown considerably. This started with Deng Xiaoping's opening up of Chinese society, which allowed for the widespread growth of organizations and associations around country. For example, there were 4,446 registered organizations in 1980 while in 2003 there were 266,612 registered organizations.⁸⁵ The growing number of social organizations began to shift their attention towards environmental issues as activism regarding other issues had been essentially crushed by government suppression. This eventually resulted in the Friends of Nature, the first major Chinese environmental NGO (ENGO), being created and registers in 1993 and 1994 respectively. This organization has worked to quell various environmental issues in China such as poaching and has also placed an emphasis on information spreading campaigns in towns and villages; membership in the

⁸⁴ Ibid. p. 91

⁸⁵ Hess, p. 50

organization rose to about 10,000, at which point the leaders of the organization placed a cap out of fear that the government would shut it down if it became too big.⁸⁶

Following the Friends of the Earth, many other ENGO's have developed in China; by 2015, 6,636 of the 289,000 registered social groups in China were ENGO's.⁸⁷ Prominent examples of this include the Centre for Legal Assistance to Pollution Victims (CLAPV) which, after its founding in 1998, has worked to provide people, especially in rural areas, with legal advice. This organization maintains a 36 member staff comprised of lawyers, professionals, and student researchers. Another example of the rise of ENGO's in China came in 1996 with the creation of the Beijing Environmental Protection Foundation. This organization differs from other ENGO's in that it is defined by its close ties with the central government and considered a GONGO rather than a true grassroots organization. From this position, it works to provide the government with advice on environmental policy and also attempts to work with grassroots organizations in order to help with funding and other needs.⁸⁸

Beyond ENGO's, environmental concerns have been clearly integrated into the public at large. For example, the 1980's saw a rise in protests against polluting factories and power plants. Likewise, complaints to national authorities between 1991 and 1993 numbered 130,000, showcasing the general awareness of Chinese citizens to the growing environmental threats that they face.⁸⁹ Polling data reflects this as respondents have increasingly shown a greater awareness of the environmental degradation that China is currently facing. For example, a study conducted by the Public Opinion Research Laboratory of Shanghai Jiao Tong University found that almost

⁸⁶ Shapiro pp. 118-123

⁸⁷ Ibid. p. 124

⁸⁸ Ho, Peter. "Greening Without Conflict? Environmentalism, NGOs and Civil Society in China." *Development and Change* 32.5 (2001): 908-912

⁸⁹ Ho, p. 899

60% of the public wanted the government to better incorporate environmental issues into economic development activities.⁹⁰

Studies such as these, along with the growing number of environmental related protests and the rise of ENGO's shows that environmentalism and civil society at large is growing in China. What remains to be seen however, is how effective citizens have been in forging a real national framework to support a robust civil society. Simple signs of civil society growth does not mean that true national movements have been able to develop. In order to see whether or not this is the case, we will consider how successful the Chinese government has been in controlling the rise of civil society.

Civil Society as a Causal Factor

The growth of ENGO's and GONGO's in China has therefore been similar to Germany in terms of numbers and diversity. Unlike Germany however, many of the organizations and protests that have been seen are mostly confined to the local level.⁹¹ Due to the lack of a strong national movement, the growth of the environmental state in China is not reflected as well within civil society, despite signs of increasing environmental awareness. As with the German case, we must understand why civil society in China has been limited in its effectiveness in order to fully understand its value as a factor in environmental state growth.

The lack of cohesion within the movement can be attributed to a variety of historical and political factors. For one thing, China has a well-developed legal framework intended on controlling and, when necessary, suppressing civil society growth. The history of these regulations goes back to the 1950's, and while some of the initial laws have been repealed, there

⁹⁰ Hongyi, Wang. "Protecting Environment Tops Public Concerns in Poll." *China Daily*. N.p., 16 May 2014. Web.

⁹¹ Hess, p. 56

remains a strong legal basis off of which NGO growth in China is carefully monitored.⁹² Table 3.1 highlights the history of this framework.

Year	Regulation	Status
1950	Temporary Regulations of Social Organizations Registration	Annulled
1950	PRC Law of Trade Unions	Annulled
1988	Regulations for Foundations	Annulled
1989	Temporary Regulations on Foreign Chambers of Commerce	In Effect
1989	Regulations for Registration and Management of Social Organizations	Annulled
1992	PRC Law of Trade Unions	In Effect
1998	Regulations for Registration and Management of Social Organizations	In Effect
1998	Temporary Regulations for Registration and Management of NGNCE's	In Effect
2004	Regulations on the Management of Foundations	In Effect

*Table 3.1: China's Laws Regarding Civil Society.*⁹³

While these laws pertain to a variety of social organizations, they have been especially consequential for NGO's. Specifically, the dual registration requirement was a major development to come out of these laws. Known commonly as the "mother-in-law" policy, this dual registration requires that NGO's must acquire a supervisory body, typically a government institution or GNGO, and that the NGO must receive permission from this body before they can register as an official organization with the Ministry of Civil Affairs.⁹⁴ Even after their registration, the conduct of their operations is scrutinized as their parent organization can face repercussions for any overstep that the NGO may commit, which makes it difficult for NGO's to

⁹² Ma, Qiusha. *Non-governmental Organizations in Contemporary China: Paving the Way to Civil Society?* London: Routledge, 2009, p. 64. Web.

⁹³ Ibid.

⁹⁴ Ibid.

effectively organize social movements or even find supervisory organizations to sponsor them in the first place.⁹⁵

What does this mean for the environmental movement in China? In short, it means that it has not been able to develop as it has in democratic, Western nations like Germany or the United States.⁹⁶ Like other organizations, environmental organizations in China must form political ties with the state in order to gain the legitimacy and resources necessary to achieve its goals.⁹⁷ Of course there have been cases in which organizations have been able to get around the rules and become influential actors with relative independence, however, even in these cases the limits are still clear. The Friends of Nature capping their membership offers an example of this. Additionally, as we will see in the following chapter, the legal remedies that social organizations can seek have also been carefully designed by the state to check any overstep and ensure compliance with state objectives.

Because of this, the environmental movement in China has not become so powerful as to drive the process of environmental state formation. Granted, the previously mentioned advancements regarding the public's awareness of environmental issues are noteworthy and it is an important development that the government has, to a certain extent, allowed the rise of associations in various aspects of society. When the true extent of this is considered however, we can see that through a strong regulatory framework the government is still largely in control of social movements. As such, the role of Chinese society in this case is mostly confined to scattered protest and occasionally violent uprisings.

⁹⁵ Ibid. p. 65

⁹⁶ Ho, 2001

⁹⁷ Ibid. p. 911

IV. Implications

From this discussion on both Germany and China's civil societies, obvious differences and subtle parallels can be identified. Most importantly, while China has opened up in certain areas and allowed the growth of NGO's and while Chinese citizens, like German citizens, have exhibited greater awareness of environmental issues, there is no environmental movement in China that is comparable to that of Germany. Even though protests and other demonstrations have in some cases put considerable pressure on local industries and governments, the Chinese government has been successful in hindering the growth of a truly influential civil society. In contrast, the German case shows a unified environmental movement that has been able to grow and build up significant influence. This has come even in the face of relatively closed off policy making structures.

From this analysis, the main questions of this thesis can be identified. In Chapter 2, while shortcomings in China's environmental state were acknowledged, the growth of administrative, regulatory, financial and knowledge based structures dedicated to environmental protection was significant enough to be comparable to that of Germany. With this in mind, we can expand upon the question driving this analysis. Specifically, the context given by this chapter leads to the following interrelated questions:

- 1) Why have both China and Germany achieved environmental state status when one lacks a civil society capable of forming a unified and effective environmental movement?
- 2) More broadly, what factors allow for environmental state development in both democratic and authoritarian regimes?

In order to answer these questions, we can first start by noting some of the parallels identified in this chapter. Despite the clear differences we have laid out, both states were noted as exclusive in their attitude towards civil society; obviously China was active in this regard while Germany was not however, in both cases it had similar implications. As Christian Hunold and John Dryzek point out, in exclusive state contexts, environmental goals are better achieved when tied with state economic and / or legitimacy imperatives.⁹⁸ Therefore, moving forward we will attempt to explain how in both cases political legitimacy has come into play as an explanatory factor in environmental state formation. In Germany, we will show that due to the political opportunity structure described in this chapter, the environmental movement sought to infiltrate the system through the formation of the Green Party and, in doing so, added environmental considerations to the state's legitimacy imperative. Similarly, in China we will see that despite the lack of an environmental movement, the fragility of state legitimacy allowed for the inclusion of environmental protection and thus produced similar results as were seen in the German case.

⁹⁸ Hunold, p. 77

Chapter 4: Political Legitimacy and the Environmental State

I. Introduction: The Importance of Political Legitimacy in Environmental State Analysis

What is Political Legitimacy?

Legitimacy is a critical aspect of any stable state, without which no government can maintain full authority over its territory free of social unrest. That being said, the types and sources of political legitimacy vary from state to state and can evolve overtime within a state. Political legitimacy is generally considered as the general acceptance of a state's citizenry in the authority of an individual or governing body to make demands and expect compliance, borne out of both a fear of the use of force and a basic belief that the person/body has the fundamental right to make those demands.⁹⁹ Previously, this belief may have been tied to family lines, with the right rule reserved to the descendants of those currently in power however, with the decay of monarchy around the world political legitimacy now encompasses a more complex and nuanced concept.¹⁰⁰ Legitimacy therefore is not so simple an acquisition as to come simply from an arbitrary set of laws or the presence of lineage. Instead, political legitimacy today is more dependent than ever before on the success of the government in satisfying the expectations of citizens, mediating interests, and incorporating national values into the creation and enforcement of laws.¹⁰¹ In this way, the nature of legitimacy can vary from state to state depending on the unique characteristics of the nation in question as expectations, interest, and values change accordingly.

⁹⁹ Rigby, Thomas H. *Political Legitimation in Communist States*. New York: St. Martin's Pr., 1982. Web.

¹⁰⁰ Fraser, John. "Validating a Measure of National Political Legitimacy." *American Journal of Political Science* 18.1 (1974): 117. Web.

¹⁰¹ Nieburg, Harold L. *Political Violence: The Behavioral Process*. New York: St. Martin's, 1970, p. 54. Web.

As such, multiple sources must be looked to in order to identify the foundations of legitimacy. These various roots of legitimacy, according to Max Weber, can be broken down into the following categories: rational-legal, traditional, and charismatic. Rational-legal is a type of political legitimacy which forms as the result of faith in institutions and the rule of law, while the traditional and charismatic types of legitimacy come about through respect for traditions and powerful individuals respectively.¹⁰² Governments can obtain legitimacy through a combination of these sources, with some being more prevalent than others. While these types of political legitimacy represent three basic forms, there are also other potential types such as “social eudaemonic” legitimacy, in which public faith is established through the government’s role as a provider of social and economic benefits.¹⁰³ In order to establish the basis of this section, these forms will be looked into more closely so that their place in the Chinese and German contexts can be better identified.

Rational-legal political legitimacy, as previously mentioned, is a form of legitimacy that is more dominant in developed Western democracies. It is based on a well-established set of institutions and laws that guide the social and political activities of a nation. Legitimacy then results as there is widespread belief in the ability of these institutions and legal processes to successfully uphold national values / interests and to function as people expect them to. An example of this can be seen, for example, in the Supreme Court of the United States as it works to defend the basic national values enshrined in the Constitution and to remain an independent body that functions above the political fray as people expect that it should; watch any State of the

¹⁰² White, Stephen. “Economic Performance and Communist Legitimacy.” *World Politics*, vol. 38, no. 3, 1986, pp. 462–482. Web.

¹⁰³ Ibid.

Union address and you will see the efforts of the Justices to maintain this legitimacy as they show no emotion and do not applaud.

In contrast, charismatic legitimacy rests on the ability of an individual or group of individuals to rally a nation behind such values as nationalism. It is in the leader that extraordinary personal charisma can be found and through this leader that people believe their own expectations, values and interests can be fulfilled. Hitler's leadership in Nazi Germany highlights the power of such a form of legitimacy. Fascism specifically has historically operated as a cult, shirking the rules and guidance of institutions in favor of loyalty to a single leader such as Hitler in Germany or Mussolini in Italy.¹⁰⁴ Traditional legitimacy is similarly separated from institutions and the rule of law and is instead built upon generations of history; monarchy for example, highlights this as people believe in the effectiveness of a ruling family simply because they have ruled for so long. This again is dependent on how successful that family has been in meeting the expectations of the public and furthering certain values and interests. Again however, both of these forms of legitimacy have become less and less prominent and are insufficient to explain legitimacy in most states today.

As such, another perspective on legitimacy must be considered in order to account for the varying regimes that exist today that do not uphold the democratic, rule-of-law based systems found in many modern Western states. The eudaemonic form of legitimacy works well to fill this void as it explains regime characteristics in many authoritarian and/or developing states. As previously stated, this type of legitimacy is essentially sourced from the role of the government in meeting citizens' expectations through performing well in improving quality of life. The means through which this is achieved can differ from nation to nation. For example, in Ghana

¹⁰⁴ Breuilly, John. "Max Weber, Charisma and Nationalist Leadership1." *Nations and Nationalism* 17.3 (2011): 477-99. Web.

where crime is a prevalent issue, the government has been attempting to maintain legitimacy through effective crime control; essentially, elites in the state support the regime more if the government is successful in policing their neighborhoods and stopping criminal activity.¹⁰⁵

How is Political Legitimacy Relevant to the Environmental State?

Around the world today civil unrest can be attributed more and more to environmental degradation. The idea that environmental conditions such as climate change can result in resource shortages and eventual conflict is becoming a prominent idea in international security studies. The violence in Darfur for example, has been considered by many to be the first large scale “climate conflict”, as increased drought in the region caused by climate change created conflict between varying ethnic groups; as the government did not respond effectively to the issue, civil war (the ultimate breakdown in state authority) was able to take hold.¹⁰⁶ While a stretch from the topic of this thesis, this example highlights the growing relationship between the environment and the political authority of states and supports the need to consider the effects of legitimacy maintenance on environmental state growth.

Therefore, this understanding of the various forms of political legitimacy is important for our discussion on environmental state growth. As will be established, the governments of Germany and China gain their legitimacy from different sources. What unites them however, is the basic necessity of this legitimacy, regardless of the source; this was touched upon at the end of the previous chapter. As the management of environmental issues has become linked with various institutions, economic performance, and our perceptions of a good quality of life, it is a natural next step to consider the ways in which the environment has become linked with political

¹⁰⁵ Tankebe, Justice. "In Search of Moral Recognition? Policing and Eudaemonic Legitimacy in Ghana." *Law & Social Inquiry* 38.03 (2013): 576-97. Web.

¹⁰⁶ Mazo, Jeffrey. "Chapter Three: Darfur: The First Modern Climate-Change Conflict." *The Adelphi Papers* 49.409 (2009): 73-86. Print.

legitimacy. Therefore, it is the aim of this section to highlight the growing role that the environment has played in maintaining legitimacy for both Germany and China and the subsequent effects that this has had on the growth of their respective environmental states.

II. Political Legitimacy and the Chinese Environmental State

The Nature of Chinese Political Legitimacy

In the case of China, the dominant form of political legitimacy must first be made clear. In contrast to many Western democracies, China does not rely on a rational-legal source of legitimacy. Instead, political legitimacy in China can be seen in other forms. For instance, the love that people had (and in many cases still have) for Mao could point to charismatic legitimacy as being prevalent in China. At the same time however, since Mao and with the onset of unprecedented economic growth, the social eudaemonic form of legitimacy seems to be dominant. This is not unique to China, as many countries with communist/authoritarian regimes make up for the lack of political freedoms granted to citizens through heavy investments into social welfare programs such as education, healthcare, job security and more; as these are dependent on continuously positive economic performance however, this form of legitimacy is quite fickle as no country can guarantee non-stop economic growth and improvement.¹⁰⁷

This development of political legitimacy in China has been noted in a study on the Communist Party's maintenance of power as a shift from an "original justification" to a "utilitarian justification". In this view, the CCP came into power through armed struggle and then first achieved legitimacy through a combination of the personal appeal of Mao and the match between communist ideology and Chinese moral traditions.¹⁰⁸ This view matches with Weber's perceptions of charismatic and traditional legitimacy. The "utilitarian justification"

¹⁰⁷ Ibid. p. 464

¹⁰⁸ Guo, Baogang. "Political Legitimacy and China's Transition." *Journal of Chinese Political Science* 8 (2003): n. pag. Print.

however, was also quite important and, as a justification of power through the role of the state in providing for the interests and welfare of the people, was bolstered through extensive investments in social welfare programs; with the death of Mao and the underwhelming charisma of his successors, legitimacy in China began to shift away from the original justification and towards the utilitarian, as people grew to expect the government to provide improved living standards.¹⁰⁹ In this, we see the rise of the dominance of the social eudaemonistic form of legitimacy in China, as the communist regime has been able to maintain consistent authority through meeting the expectations of the people in respect to economic growth and subsequent quality of life. The question now is whether or not China will be able to continue to meet those expectations in the future and what the implications are for the state if it is not able to match the rising standards of its citizens.

The Environmental Link

In this way, the merging of the environment and legitimacy in China can be seen. The economic growth rates that have resulted in China's rise as a world power are beginning to wane. The recent trade war with the United States can be blamed in part but in reality the slowdown began long before the trade war.¹¹⁰ As the country shifts economic gears, it will become more and more difficult for the government to boast the same successes as a means of retaining its legitimacy. To be clear, this is not to say that the economic outlook for China is negative. The point is that even with moderate growth rates and a bright economic future, the continued promise of improved living standards that social eudaemonistic legitimacy demands would be less clearly met by economic growth alone. Other standards, especially environmental standards, will

¹⁰⁹ Ibid.

¹¹⁰ Bradsher, Keith, and Ailin Tang. "China's Economy Slows Sharply, in Challenge for Xi Jinping." *The New York Times*. The New York Times, 14 Dec. 2018. Web.

become more and more embedded in the formula of China's political legitimacy. This can be summed up by the voice of one Chinese citizen who noted in a study on the relationship between pollution and perceived quality of life that, "...the economy is good enough and there are plenty of opportunities to make money, but the air quality is so bad that I don't even want to go out....I'd rather have a healthier living environment than own a mountain of gold."¹¹¹

These underlying issues of environmental degradation are compounded by intense urbanization. In China, the main economic divisions can be seen between rural and urban communities. The growing Chinese cities are the hubs of economic development. Urban populations in China are estimated to grow by over 300 million by 2030, which makes the future of environmental progress look bleak; the increase in urbanization levels to 41% in 2005 brought with it a host of environmental issues, as air, water and soil pollution worsened and produced 7 of the world's 10 most polluted cities.¹¹² This is especially troubling in relation to legitimacy, as cities have historically been hotbeds for social unrest when public expectations are not met.¹¹³ As urbanization, affluence and expectations rise, and as the environment continues to worsen under such strains, the ability of China's current regime to meet expectations will become related to the environment in the same way that it currently is with economic growth.

Environmental protection is therefore tied to legitimacy through its growing importance in public perceptions on quality of life. As conditions worsen, so too do issues of social unrest and violent protest. For instance, the year 2005 alone saw over 50,000 documented protests related to environmental issues in China.¹¹⁴ In fact, the number of environmental incidents has

¹¹¹ Li, Xiaoyue, and Bryan Tilt. "Perceptions of Quality of Life and Pollution among China's Urban Middle Class: The Case of Smog in Tangshan." *The China Quarterly* 234 (2017): 340-56. Print.

¹¹² Roberts, Brian. *Urbanization and Sustainability in Asia: Case Studies of Good Practice*. Manila: Asian Development Bank, 2006, pp. 101-106. Web.

¹¹³ Beeson, Mark. "The Coming of Environmental Authoritarianism." *Environmental Politics* 19.2 (2010): 276-94. Print.

¹¹⁴ Lieberthal, Kenneth, and Elizabeth Economy. "Scorched Earth: Will Environmental Risks in

increased by 29% each year since 1996.¹¹⁵ Such outburst of social unrest indicate a breakdown in legitimacy, as it highlights the failure of the government to meet citizens' expectations in fulfilling their interests (improving standards of living). In a study published in 2013, Chinese citizens in urban areas were surveyed on their satisfaction with public management of eight different areas (public education, public healthcare, public housing, public safety, infrastructure, public cultural/recreational facilities, public transportation, and environmental protection) and they were asked to rank their satisfaction on a scale of 1-10, 10 being the best; environmental protection ranked last out of the eight areas, with a score of approximately 6 out of 10.¹¹⁶ Environmental protection is then clearly an area in which the current regime can and must improve conditions and bolster their authority through growth in public satisfaction.

Finally, the role of environmental protection in maintaining economic growth must be noted. While conventional wisdom focuses on the opposing interests of the environmental and economic realms, it is becoming more and more evident today that issues such as climate change and air pollution carry with them their own economic costs and that continued productivity is dependent on solutions to these problems. The World Bank highlighted this relationship in 2007, when it estimated that 5.8% of GDP could be considered lost when the costs of negative environmental externalities such as pollution are taken into account.¹¹⁷ Furthermore, water pollution has severely limited China's fresh water supply, straining demand not only for drinking but also for agricultural use, as 28% of China's rivers were considered in 2014 too toxic even for irrigation purposes.¹¹⁸ The environmental issues that the state currently faces are therefore

China Overwhelm Its Opportunities?" *Harvard Business Review*. N.p., 01 Aug. 2014. Web. 17 Dec. 2018.

¹¹⁵ Shapiro, p. 10

¹¹⁶ Zhong, Yang, and Yongguo Chen. "Regime Support in Urban China." *Asian Survey* 53.2 (2013): 369-92. Web.

¹¹⁷ Shapiro, p. 7

¹¹⁸ Ibid. p. 8

hindering its future economic potential and weakening the base upon which the government has built its authority.

In these ways, the authority of the Communist Party in China has become dependent on the environment. On one level, they must address growing issues such as air pollution to create an environment that allows for continued economic growth, which provides the current basis of their authority. On another level, they must address environmental issues as another means of improving quality of life, as the rapid economic growth rates inevitably slow and environmental conditions increase in importance to the public. Through these considerations, it is becoming more and more clear to the Chinese government that environmental issues must be tackled for the future of their authority in China.

Effects on the Environmental State

The merging of environmental issues with questions of state legitimacy is therefore, quite obvious in China today. Our discussion on this trend so far has established the link between environmental degradation and social unrest in a state that relies on a form of political stability that has proven to be prone to collapse. With this link understood, the question is now centered on the outcomes. How has the relationship between the environment and political legitimacy in China helped to build the Chinese environmental state? The answer can be found in the structural changes that have been made to ease public tensions and to improve quality of life in regards to the environment.

An example of this can be seen in the NMCEP program mentioned in the literature review. While aspects of this program's implementation aided in building our environmental state definition, it is helpful now to return to the topic as it highlights the influence that legitimacy maintenance has had in the specific case of China. Interviews with government

officials related to the program noted in interviews that a major influence in its implementation was the fact that it would aid in socio-economic development.¹¹⁹ As such, the program was in part useful in, "...mobilizing public support for the work of the EPB and enhancing its legitimacy and authority."¹²⁰ This pressure to maintain legitimacy then resulted in increased financial commitments made by local governments to build their environmental protection capacities (the program mandated that cities spend a certain proportion of their GDP per year on environmental programs in order to achieve the NMCEP standard).¹²¹ By 2009, 67 cities throughout the country had achieved this status, marking, at least to some extent, a growth in the environmental state at the local levels.¹²² Eventually, the success of this program led to a more the creation of a more ambitious city development plan with stricter requirements, known as the National Ecological City program.¹²³ This seems to correspond with the development of the ecological civilization concept that will be covered in Chapter 6.

This process has been furthered by the cadre evaluation initiative which was widely regarded as an effort to quell social unrest through improved environmental management at the local levels. As explained in Chapter 2, the reflection of environmental initiative implementation throughout the various levels of government is an indicator of environmental state status. In this respect, China has historically lagged as it has had issues with local officials and policy enforcement. Due to the increasing importance of these issues in maintaining state legitimacy however, the state undertook stricter evaluation of party cadres to ensure that they were complying with targets set by the state. Heavy metal pollution offers an example of this, as toxic

¹¹⁹ Li, "The Local Environmental State in China", pp. 131-132

¹²⁰ Ibid. p. 132

¹²¹ Ibid. p. 122

¹²² Ibid. p. 121

¹²³ Ibid. p. 123

levels of these substances were found in the blood of many local children; this resulted in a revolt by local citizens, during which police cars were flipped and the industrial facility was broken into and vandalized. The government then set hard targets at heavy metal pollution reduction of 15% from 2007 levels by 2015 and included provisions to ensure the accountability of local officials, such as the inclusion of pollution reduction results by local governments in their socio-economic development evaluations.¹²⁴

Actions taken to prevent social unrest can also be seen through the expansion of bureaucracy in the establishment of environmental courts. The role of these courts has been essentially to provide a public outlet of anger against local polluters and to also serve an educational function on environmental issues as judges of these courts often speak at local schools. It has been noted that the number of cases these courts actually hear, in relation to the numbers of environmental incidents is quite low (the environmental court in Kunming province only heard 106 cases between its establishment in 2008 and 2012) and the cases that are heard are often symbolic, exemplified by the 2010 lawsuit the court in Kunming filed against two pig farms, simply to warn other polluters. In this way, the purpose of the courts has mainly been to act as a symbol of environmental action to help ease public dissatisfaction and to go after polluters that the government wishes to go after.¹²⁵

Lastly, air pollution has presented itself as one of the greatest threats to political stability in China. The US embassy's installation of a PM2.5 monitor at its headquarters in Beijing to tweet hourly readings highlights this fear, as the reaction of the Chinese government was to criticize the mistrust that this created for China's own environmental organizations.¹²⁶ In

¹²⁴ Wang, Alex. "The Search for Sustainable Legitimacy: Environmental Law and Bureaucracy in China." *Harvard Environmental Law Review* 37 (2013). Web.

¹²⁵ Stern, 2014

¹²⁶ Wang, p. 408

response to such threats of air pollution, China has committed to cut the percentage of its total energy produced by coal from 66% to 62% by 2020, with the share of renewables rising from 11% to 15%.¹²⁷ The state has even turned to some unconventional means, such a 30 million dollar investment in the summer of 2016 to curb air pollution through “cloud seeding” techniques that are intended to increase rainfall and clear the air of heavy pollutants.¹²⁸

Social stability in China has therefore directly influenced government action on environmental issues. While it can be argued that this action is somewhat shallow, as seen by the environmental courts, it shows the growing importance of the environment in the CCP’s maintenance of authority. This then helped to expand the environmental state through a growing bureaucracy, greater commitments to enforcement of policies and targets at the local levels, and the commitments of national plans and funding towards curbing air pollution. In these ways, there is a direct link between political legitimacy and the environmental state in China.

III. Political Legitimacy and the German Environmental State

The Nature of German Political Legitimacy

Unlike the case of China, political legitimacy in Germany can be significantly tied to entrenched democratic institutions. While economic success and public welfare still play an important role, the public faith in the democratic processes and laws that guide the state are the underlying sources of state legitimacy. Such setbacks as economic slowdowns are therefore not as likely to produce questions of authority or social unrest. Instead, it is through the democratic institutions that define the state that the interests, values and expectations of the people are

¹²⁷ Qi, Ye, Nicholas Stern, Tong Wu, Jiaqi Lu, and Fergus Green. "China's Post-coal Growth." *LSE Research Online*. London School of Economics and Political Science, 25 July 2016. Web.

¹²⁸ Brodwin, Erin. "China Spent Millions on a Shady Project to Control the Weather Ahead of the Beijing Olympics - and Dozens of Other Countries Are Doing It Too." *Business Insider*. Business Insider, 29 July 2016. Web. 18 Feb. 2019.

expressed. Specifically, the German parliament represents the ultimate outlet for these ingredients of political legitimacy.

Parliament in Germany today consists of two bodies known as the *Bundestag* and *Bundesrat*. The *Bundestag* consists currently of 709 seats, filled through public elections every four years. This is the primary legislative body in Germany and also works to elect the Chancellor of the state. The *Bundesrat* in contrast is more of a secondary body composed of 69 members that are appointed by Germany's 16 states and is therefore responsible for ensuring that state interests are protected in any federal legislation that involves concurrent state/federal issues.¹²⁹ While the *Bundesrat* is of course an important factor in German governance and the creation of policy, the *Bundestag* will be the focus of this section for a couple reasons, the first being the public elections. As public elections dictate the party composition of the body's seats, it is a better reflection of national values / interests and would therefore offer more of a glimpse into how citizens expect their institutions to function. The second reason, stemming from the first, is that it is in the *Bundestag* where coalition building can bring together diverse positions to form a governing majority. Through these aspects of the *Bundestag*, the role of the body in establishing public trust in the institutions of German government can be seen.

For example, in the *Bundestag* today there are six parties that make up the body, those being the CDU/CSU, SPD, AfD, FDP, Die Linke, and Alliance 90/the Greens. The variety of parties present highlights the varying political beliefs that they represent. In contrast with, for instance, the United States Congress where two major parties each represent broad coalitions of voters, small parties can form and represent more specified interests in Germany, where only 5%

¹²⁹ Dalton, Russell J. "Chapter 2: The Institutions of Governance." *Politics in Germany*. New York: HarperCollins College, 1993. 5-10. Print.

of the national vote in an election is required to obtain seats in parliament.¹³⁰ Coalition building then happens between parties rather than within and it is in this process that political perspectives are brought together to form an effective governing majority; even with the parties left out of the governing coalition, their own views still hold influence through their presence in the body.

This was seen for example through the influence that AfD had on Germany's policies regarding refugees. The AfD, as Germany's far-right party, took advantage of the rising tensions in Germany and Europe in general over the influx of Middle Eastern refugees. After forming in 2013, the AfD built upon the fear and discontent that this mix of intense immigration (over 1 million refugees from countries such as Syria, Iraq and Afghanistan came to Europe in 2015 alone) and economic discontent has produced.¹³¹ This led to surprising electoral success in 2017 and they are now represented in Parliament with 91 seats, making them the third largest party and the main opposition to the CDU/CSU and SPD coalition.¹³² This rising pressure led to Angela Merkel, as the head of the CDU, reversing her own course of a German "Wilkommkultur" and agreeing to a deal sending a large number of refugees back.¹³³ In this way, opposition parties are still able to effectively represent the values of their supporters within the system.

While the purpose of this section has not been to provide a comprehensive analysis of political legitimacy in Germany, the characteristics of the German government mentioned are important as they introduce the basic concepts relevant for this study. It has been important simply to establish the dominance of institutions and legal processes in state legitimacy as

¹³⁰ Wiliarty, Sarah Elise. "Nuclear Power in Germany and France." *Polity*, vol. 45, no. 2, 2013, pp. 281–296. *JSTOR*

¹³¹ Schütz, Simon. "Germany's Far-Right AfD Party Now Polls Second." *NPR*. NPR, 30 Sept. 2018. Web.

¹³² *Deutscher Bundestag*, "Distribution of Seats in the 19th German Bundestag." N.p., n.d. Web.
<https://www.bundestag.de/en/parliament/plenary/distributionofseats>

¹³³ McAuley, James, and Rick Noack. "What You Need to Know about Germany's Immigration Crisis." *The Washington Post*. WP Company, 03 July 2018. Web.

explained through Weber's rational-legal perspective. The German Parliament, as a primary symbol of the state's democratic institutions, maintains this legitimacy through diverse party representation made possible through the 5% threshold and coalition building. These are the key points that will then become important in showing exactly how environmental issues worked their way into the equation of political legitimacy in Germany and the effects that this had on the environmental state.

The Environmental Link

From this discussion on political legitimacy in Germany, the role of political parties and the *Bundestag* in maintaining public trust in the government is evident through their ability to effectively represent various public interests and values. In this way, the Green party in Germany has acted as the major link between public environmental interests and government action. As such, through a consideration of the party's origins in Germany and its subsequent effects on the government, the growing importance of the environment in German political legitimacy.

The history of the Green party in Germany goes back to the late 1970's when key issues such as nuclear power were igniting heated debate and a growing environmentalist movement. At this time, the environmental movement in Germany was largely confrontational towards existing establishments and the political institutions in the West German state. This type of resentment towards the state was a common theme during the 70's as the environmental movement was matched by a growing student movement sparked by the increase in size of German universities and student enrollment. For example, among postindustrial citizens (citizens with a higher level of education and affluence) in West Germany, dissatisfaction with the democratic regime increased from 8% in 1972 to over 23% in 1976.¹³⁴ Another survey

¹³⁴ Schmid, Carol L. "The Green Movement in West Germany: Resource Mobilization and Institutionalization." *Journal of Political and Military Sociology* 15 (1987): 33-46. Web.

conducted in the midst of the anti-nuclear protests showed that in the election districts of Freiburg and Emmendingen in 1975, 72% and 63% respectively of citizens believed the existing parties did not represent their interests.¹³⁵ It was therefore quite clear that many in Germany at that time did not feel that the government was representing national values as expected.

In 1980 however, various factions of the movement came together to form the Green Party. Within three years, the party was able to rally enough support to surpass the five percent threshold; in 1983, with 5.6% of the national vote, the Green Party entered Parliament. It was in this new party that many in the environmental movement such as the students, found better representation. For instance, before the birth of the Green Party many West German citizens noted little difference between the environmental proposals of the two leading parties at that time.¹³⁶ The Green Party has thus established an institutionalization of environmental concerns within the German government in its offer of alternative and distinct representation of national environmental values. The intrusion of environmental concerns into the political legitimacy of Germany manifested itself in the creation of the SPD-Green coalition in 1998; even outside of this coalition the Green Party has achieved consistent success and influence in the *Bundestag*, as seen in 2009 when it polled at 10.7% nationally, the best results in the history of the party.¹³⁷

The intrusion of the Green Party into German politics can therefore, be considered a primary example of the merging of environmental concerns with the legitimacy imperative of the state. This has been seen through the rise of the party from growing social distrust in the democratic institutions and procedures. As people came to believe that the existing institutions were not representing them (as seen in the widespread social unrest and protest at the time) the

¹³⁵ Schruers, p. 85

¹³⁶ Ibid. p. 41

¹³⁷ Wiliarty, p. 293

Green Party was created to fill this void. Through the growth in support of the party, its eventual success as a coalition partner in 1998, and its continued influence as a member of Parliament, the story of the Green Party highlights the inclusion of the environment in factors relevant for the maintenance of authority and public support for Germany's democracy. 2006 polling underscores this trend, as 94% of the public in the western part of Germany and 93% of the public in the eastern part, say that protection of the environment is "definitely or probably government responsibility"; in comparison, "help industry" polled at 58% and 62% for West and East respectively.¹³⁸

Effects on the Environmental State

As the relationship between the environment and political legitimacy in Germany has been established, the actions that the government has taken in response to the growth of this relationship must be considered in order to understand the effect that this has had on Germany's environmental state growth. This can be seen again following the path of the Green Party in the *Bundestag*. From their initial arrival in the body to their eventual coalition and beyond, the relationship between the legitimization imperative of the state and environmental concerns that this party represents has had significant impacts on building up the environmental state structures outlined by Duit's framework.

This can first be seen in the role of the Green Party's rise in increasing the importance of the environmental agenda in German government. Responding to the increasing size of the Greens and the rising distrust of the system of that it represented, the other major parties in the *Bundestag* began to adopt more aggressive environmental initiatives. This was seen, for instance,

¹³⁸ Dalton, Russell J. "Chapter 10: Policy Outcomes." *Politics in Germany*. New York: HarperCollins College, 1993. 5-10. Print.

through the actions taken under the conservative leadership of Chancellor Helmut Kohl. In an expansion of administrative capacity, the BMU was created during this period in 1986 partly in response to the unrest resulting from the issue of nuclear power (worsened by the Chernobyl incident) and the subsequent rise of the Green Party as opposition.¹³⁹ Regulatory capacity was also increased in part as a response to Green Party pressure, as can be seen in the amendments to the Federal Clean Air Act in 1985 and 1990 which strengthened the definition of Best Available Technology to further reduce air pollution and help ease the crisis of *Waldsterben* (forest death) that the Green Party pushed as a critical issue.¹⁴⁰ From these examples, the role of the Green Party in raising the importance of environmental issues within other parties in the *Bundestag* and subsequently the government at large is clear.

Furthermore, the Green Party's ascension into a governing coalition with the SPD allowed it follow through on some of its main priorities such as the development of the Eco-tax and the phase out of nuclear energy. Passed in 1999, the Law Introducing the Environmental Fiscal Reform worked to reduce energy consumption and resultant emissions through increased taxes on various energy products such as fuel oils, gasoline, diesel, electricity and natural gas; these taxes came with expected decreases in carbon dioxide production of 20-25 million tons per year and revenue generation meant to reduce the burden of employers and employees in pension insurance contributions by up to 1.9% by 2003.¹⁴¹ Through this, the inclusion of environmental concerns into primary state functions such as revenue production for social programs can be seen to have resulted from the Green Party's success. Revenues from this tax also went towards

¹³⁹ Brand, Karl-Werner. "Dialectics of Institutionalisation: The Transformation of the Environmental Movement in Germany." *Environmental Politics* 8.1 (1999): 35-58. Web.

¹⁴⁰ Sprinz, Detlef F., and Andreas Wahl. *Reversing Course: Germany's Response to the Challenge of Transboundary Air Pollution*. Rep. no. 42. Potsdam: Potsdam Institute for Climate Impact Research, 1998. Web.

¹⁴¹ Bach, Stefan, Michael Kohlhaas, Bernd Meyer, Barbara Praetorius, and Heinz Welsch. "The Effects of Environmental Fiscal Reform in Germany: A Simulation Study." *Energy Policy* 30.9 (2002): 803-11. Print.

investment into renewable technologies as the Green Party worked to phase the state off of nuclear power, a key issue in the social unrest that sparked the need for the party; the party established the goal of closing all nuclear facilities by 2020, a goal that initially seemed unfeasible but gained the support of Angela Merkel in 2011 after the Fukushima meltdown in Japan.¹⁴²

While the influence of the rise of environmental issues in German political legitimacy was in these ways helpful in initiating in these changes, there have been limits to the extent to which this accounts for Germany's advancements. For example, this was seen during the period of reunification in the 1990's. While the growth of post-industrial values in the West led to questions regarding the effectiveness of existing institutions in meeting public expectations, the economic collapse of the East hindered the occurrence of any similar phenomena in this part of the newly unified nation. In this way, political legitimacy in Germany reverted in some ways back to meet the more basic expectations of its citizens in the East such as job production and economic growth.¹⁴³ Additionally, while it was clearly augmented by the growing relationship between the environment and state legitimacy, Germany's active stance towards environmental issues began before the heavy social unrest discussed earlier began to take hold. The 1950's for instance, saw an increased response at the federal level to issues of water and air pollution, culminating the passage of the Water Household Act of 1957 and the Clean Air Maintenance Law of 1959.¹⁴⁴

IV. Conclusion

From the establishment of the relationship between political legitimacy and the

¹⁴² Dalton, "Chapter 10: Policy Outcomes", p. 17

¹⁴³ Lees, Charles. "Environmental Policy in the United Kingdom and Germany." *German Politics* 16.1 (2007): 164-83. Web.

¹⁴⁴ Ibid.

environmental states in Germany and China, the explanatory value of this theory can be identified. In China, a direct link between shifting societal expectations, social unrest and the increasing urgency of environmental management can be found. This urgency motivated and produced some of the first steps towards increasing state capacity through administrative, regulatory and financial commitments. These results came even in the face of an authoritarian state and the absence of a unified civil society. This is due mostly to the fact that legitimacy in China (and in most authoritarian states) is more fragile than in states more deeply engrained institutions and legal structures and the motivation to maintain it and even build upon it by improving living conditions was quite strong.

In Germany, we showed a similar link yet less direct link. In this case, an active civil society and its unified environmental movement were able to attach environmental concerns to the state legitimacy imperative by forming a political party. In doing so, it overcame the obstacles of Germany's passively exclusive state noted in the previous chapter and was able to work from the inside to help implement policy initiatives that worked towards building the environmental state. This link is less direct than it is in the Chinese case however, as the well-established democratic institutions of the state in Germany do not lose legitimacy as easily. This is partly why civil society had to take the political route to affect change as simply engaging in protest and social unrest was not enough on its own to merge political legitimacy with environmental protection. Once these two concepts were effectively merged, the imperative was still not quite as strong as it was in China where the threat of a true crisis remained.

In this way, while there is certainly a relationship now between the environment and political legitimacy in Germany and as the same relationship can be found in China, the weaker explanatory value of this relationship in the German case leaves us with an incomplete argument.

As such, other explanations will help to strengthen the analysis of environmental state creation in both states. While political legitimacy offers the first common link, the following sections on international forces and ecological modernization will provide a more comprehensive understanding of each state and environmental state formation processes as a whole.

Chapter 5: The Role of International Influences in Promoting Environmental State Development

I. Introduction: the Environmental State in an International Context

The Relevance of International Linkages

It is quite clear today that no country acts independently of global events. As globalization processes increase the level and importance of international trade and cooperation, decisions made on one side of the world can impact global markets and politics in such ways as to sway the domestic decisions of states on the other. The growth of international institutions and supranational organizations can likewise have a marked impact on the domestic policies and, subsequently, the domestic character of states. This is especially true for environmental issues. Therefore, as the role of the state has grown to include a number of international commitments, and as states now rise and fall within an increasingly powerful global framework, so too must the environmental state be viewed in this globalized context. Despite their many differences, both Germany and China are powerful and active members in international trade and institutions. Through this underlying similarity, the specific effects that these international linkages have had on each nation's environmental state growth will be made clear.

Going back to the discussion on comparative environmental politics in the introduction of this thesis, multilevel linkages are a key component of comparative analyses within this field of study. As Meadowcroft points out and Robyn Eckersley expands upon, this outward perspective of the state is important in analyzing the development of environmental states as they are, "...increasingly an international creation in response to transboundary ecological problems, manifest in a growing raft of international environmental treaties..."¹⁴⁵ Therefore, the advent of

¹⁴⁵ Eckersley, Robyn. "National Identities, International Roles, and the Legitimation of Climate Leadership: Germany and Norway Compared." *Environmental Politics* 25.1 (2015): 180-201. Web.

Multilateral Environmental Agreements (MEA's) and environmental conferences can be looked to in order to consider the effects of international influences on environmental state formation. It is important in this case however, to look beyond environmental action plans and MEA's; many states have signed on to such agreements and have not achieved environmental state development. The inclusion of environmental imperatives into other international institutions and organizations will therefore be considered. On top of this, we will consider underlying issues with national security that Germany and China both share. As these relate to energy consumption, they are inherently tied to environmental issues.

As such, many international dynamics will be taken into account in this chapter in order to better understand the process of environmental state creation in each nation. It is the contention of this section that in an ever globalizing world with stronger international institutions, organizations and dependencies, a wide range of international pressures can act as catalysts in environmental state development and, in the cases of Germany and China, have already done so.

II. The German Case in an International Perspective

Germany's Position at the International Level

Since the end of the Second World War, the story of Germany has been one inherently shaped by the outside world. From occupation to reunification, recent German history has been marked by a period of "normalization" in which it has attempted to reintegrate itself into the global community through reestablishing regular political and economic ties. During this same period, we have seen Germany become a member and leader of the European Union along with an international beacon of stability and democracy.

A critical part of this story is tied to the environmental state. While we have explored the link between the environmental movement, the legitimacy imperative and environmental state development, this explanation alone does not offer a full understanding of the dynamics at play. For one thing, it is important to note that the beginnings of the environmental state in Germany can be seen before the widespread growth of the environmental movement took hold. For example, the basis of modern German environmental policy began in the 1960's and 1970's under the SPD-FDP coalition and these fundamental advancements were made without any real pressure from society.¹⁴⁶ Looking outwards, we will attempt to fill some of these gaps by considering Germany's position at the international level since the 60's and the influence that this has had in the state's domestic characteristics.

As the growth of the global environmental regime has become quite evident, so too has Germany's role as both a participant and lead state in this process. This regime, while marked by the increasing number of MEA's mentioned in the previous section, is largely the result of a broader process through which a set of norms, assumptions and organizations associated with the human-environment relationship are integrated.¹⁴⁷ Evidence of this process can be found in the correlation between the increasing scope of environmental treaties and the number of national environmental ministries in states around the world.¹⁴⁸ As such, Germany's position in this regime and its domestic consequences are worthy of consideration.

On top of this, Germany's further integration into the increasingly globalized economy and its obligations to uphold a variety of EU standards along with its own are important to

¹⁴⁶ Weidner, Helmut. *25 Years of Modern Environmental Policy in Germany: Treading a Well-Worn Path to the Top of the International Field*. Working paper no. FS II 95-301. Berlin: Wissenschaftszentrum Berlin Für Sozialforschung, 1995. Web.

¹⁴⁷ Meyer, John W., et al. "The Structuring of a World Environmental Regime, 1870–1990." *International Organization*, vol. 51, no. 4, 1997, pp. 623–651., doi:10.1162/002081897550474.

¹⁴⁸ *Ibid.* p. 625

consider in any analysis of the German state, including its growing environmental responsibilities. Specifically, Germany dependence on foreign energy sources along with the role of the global environmental regime in steering German policy will be highlighted in the following sections. From this, the relationship between international influences and the German government's attempt to build the environment state will be seen.

Access to Energy Resources

Despite its reputation as a manufacturing powerhouse, Germany is not blessed with a wide array of natural resources. While coal is relatively abundant, the rise of the Green Party and its representation of the public response to acid rain described in Chapters 2 & 3 have made further use of this resource problematic. Likewise, other domestic energy sources such as nuclear power have not been able to meet Germany's energy demands as it too has had a controversial past and has been scheduled to be phased out by 2022.¹⁴⁹ As a result, oil and natural gas have largely acted as the base of German energy usage and, from a dearth of domestic sources, the state has maintained a significant reliance on foreign imports of these resources. This reliance goes back to the 1950's when West Germany sourced much of its oil from the Middle East and can still be seen to this day in its dependence on Russia.¹⁵⁰ In 2015 for example, Russia provided 40% of Germany's total natural gas imports.¹⁵¹ As with natural gas, in 2016 Russia supplied almost 40% of Germany's 91 million tonnes of imported oil.¹⁵² Table 5.1 gives more detail on

¹⁴⁹ Staudenmaier, Rebecca. "Germany's Nuclear Phase-out Explained ." *DW.COM*, Deutsche Welle, 15 June 2017, www.dw.com/en/germanys-nuclear-phase-out-explained/a-39171204.

¹⁵⁰ Dolata-Kreutzkamp, Petra. "Canada-Germany-EU." *International Journal: Canada's Journal of Global Policy Analysis* 63.3 (2008): 665-81. Web.

¹⁵¹ U.S. Energy Information Administration, *Germany - Overview*. Rep. August 2016. Web. <<https://www.eia.gov/beta/international/analysis.php?iso=DEU>>

¹⁵² Federal Ministry for Economics Affairs and Energy, "Oil Imports and Crude Oil Production in Germany." *BMWi*. n.d. Web. <<https://www.bmwi.de/Redaktion/EN/Artikel/Energy/petroleum-oil-imports-and-crude-oil-productions-in-germany.html>>.

Germany's energy sources and shows the persistence of its overall dependence on imports in recent decades.

Resource	Domestic Production of Resource (% of total usage)		Imports of Resource (% of total usage)	
	2006	2016	2006	2016
Mineral Oil	3%	2%	97%	98%
Natural Gas	18%	8%	82%	92%
Hard Coal	33%	7%	67%	93%
Lignite	100%	100%	0%	0%
Nuclear Fuels	100%	100%	0%	0%

*Table 5.1: German Energy Imports v. Domestic Production.*¹⁵³

With such a high dependence on foreign imports, Germany has been subject to a tumultuous history of energy security. This was first seen in the 1970's, with the oil shocks that occurred that decade. While the first of these (caused by the OPEC embargo) was less significant for Germany in particular as it was mostly aimed at American markets, it acted as a wakeup call for Germany and Europe at large; the growing relationship between energy and national security was placed on the national agenda.¹⁵⁴ Later, in 2006 and 2007, conflicts with the Ukraine and Belarus prompted Russia to shut down major gas pipelines, putting Germany and much of Europe in danger of energy shortages.¹⁵⁵ Events such as these further validated German policy makers' growing belief that their dependence on foreign oil and natural gas made the country

¹⁵³ BGR Bundesanstalt Für Geowissenschaften Und Rohstoffe, "Import-dependency and Domestic Supply Level in Germany of Specific Primary Energy Resources in 2006 and 2016." BGR. Web. <https://www.bgr.bund.de/EN/Themen/Energie/Bilder/EnergyStudy2017/ene_import_dependency_2016_en_g.html?nn=1548106>.

¹⁵⁴ Ikenberry, G. John. "The Irony of State Strength: Comparative Responses to the Oil Shocks in the 1970s." *International Organization* 40.01 (1986): 105-37. Web.

¹⁵⁵ Dolata-Kreutzkamp, p. 667

incredibly vulnerable to any number of geopolitical events. This is significant as it marked a new paradigm in German energy policy under which energy was seen as an issue of national security, which differed from the previously dominant presumption that energy was solely an economic issue that should be left largely to market actors.¹⁵⁶

From this shift in German energy policy, the effects of international influences on the environmental state can begin to be seen. In this case, these effects are evident through increased funding for green technology R&D and a strengthened drive to improve industrial efficiency. Going back to the oil shocks of the 1970's, Germany followed the United States in pursuing taxation and federal spending as their main response to this growing threat.¹⁵⁷ In order to diversify and strengthen their own domestic energy production, Germany increased their public R&D spending on energy in the years following the oil shocks; in 1976 nonnuclear government energy R&D spending amounted to 116.7 million dollars, while in 1978 and 1980 this number increased to 239.1 million and 261.1 million dollars respectively.¹⁵⁸

Despite decades of pursuing this strategy however, the Russian pipeline shutdowns showed that previous efforts had not been sufficient, and added a new sense of urgency to improve efforts at building Germany's green energy capacity.¹⁵⁹ These efforts constituted one of the three fundamental principles upon which Germany's new *Energie-Außenpolitik* (energy foreign policy), which was outlined by three working groups established in 2006 at the start of a series of national energy summits; climate change was also included as a key aspect of this energy / national security hybrid policy approach.¹⁶⁰ In order to implement this new approach to

¹⁵⁶ Ibid., pp. 666-667

¹⁵⁷ Ikenberry, pp. 129-130

¹⁵⁸ Ibid.

¹⁵⁹ Dolata-Kreutzkamp, pp. 668-670

¹⁶⁰ Ibid.

energy policy in a more aggressive way than previous efforts, the *Energiewende* (energy transformation) was established in 2011 as Germany's updated plan build up its domestic capacity to produce green energy sources and move away from coal, oil and nuclear power.¹⁶¹ While this plan was in part a response to the phase out of nuclear energy which began under the Green coalition, a major motivating factor was also the increased energy security that investments in domestic green energy would bring, as was noted by former Minister for Economics and Energy Sigmar Gabriel.¹⁶² In order to effectively oversee and implement the *Energiewende*, significant bureaucratic and financial structures had to be put into place. For example, the BMWi added the Directorate-General III which included divisions responsible for incorporating the goals of the energy transformation into Germany's energy structure.¹⁶³

The German government's goal of energy independence has therefore had a significant impact on Germany's environmental initiatives. International instability, by highlighting the importance of domestic energy production, has pushed Germany to invest heavily in a state led energy transition. This transition requires an extensive administrative, regulatory and financial framework. As such, the influence of international forces can be seen to have helped push environmental state growth in Germany.

Global Environmental Regime

Because of Germany's recent attempts to normalize its role in the global community and reshape its national image, Germany has been motivated to take significant measures to ensure its own participation and compliance with the international environmental regime.¹⁶⁴ On top of

¹⁶¹ Eckersley, 2015

¹⁶² Ibid.

¹⁶³ Melo, Conrado Augustus De, Gilberto De Martino Jannuzzi, and Sergio Valdir Bajay. "Nonconventional Renewable Energy Governance in Brazil: Lessons to Learn from the German Experience." *Renewable and Sustainable Energy Reviews* 61 (2016): 222-34. Web.

¹⁶⁴ Ibid.

this drive to reemerge as a global leader, the oil shocks mentioned in the previous section along with the move away from nuclear power and coal explained in the previous chapter led to an increased motivation to learn from and work with other countries to solve domestic environmental issues.¹⁶⁵ As a result, Germany's environmental policy measures have been significantly shaped and steered by this regime. For this reason, it is critical to look into the ways in which the growth of the environmental regime has driven the formation of the German environmental state, through multilateral environmental agreements, international conferences, and the inclusion of environmental considerations into international financial and political institutions.

These influences can be seen in the beginning of Germany's environmental state growth. In its attempts to integrate itself into the environmental regime, Germany looked to the United States as a model. In fact, many of the initial advances in German environmental policy resulted from the progress that German policy makers at the time saw in US environmental state development. The CDU-CSU coalition government during the 60's in Germany, even before the Green Party rose to power, began taking the initiative on pollution control, and looked to American environmental policy to craft its first major legislation, the National Environmental Policy Act, in 1969.¹⁶⁶ Continuing this trend of following international (especially American) pressures, the German government followed along with the United States in the 70's when the American government began to push international action on the issue of chlorofluorocarbons (CFC's) and ozone depletion.¹⁶⁷ Following steps to reduce its CFC use, Germany set itself up for

¹⁶⁵ Weidner, Helmut, and Lutz Mez. "German Climate Change Policy." *The Journal of Environment & Development* 17.4 (2008): 356-78. Web.

¹⁶⁶ Schreurs, Miranda A., and Elizabeth Economy. "Domestic Institutions and International Environmental Agendas in Japan and Germany." *The Internationalization of Environmental Protection*. Cambridge: n.p., 1997. 134-61. Print.

¹⁶⁷ Ibid.

the eventual adoption of the Montreal Protocol, which came about in 1987 and was approved by the German government in 1988.¹⁶⁸ This then had a significant impact on increasing Germany's regulatory framework as it culminated in the ban of CFC use through the CFC/halon Prohibition Ordinance of 1991.¹⁶⁹

This example highlights the influence of the environmental regime in greening Germany's industry and supporting sustainable development. Adding to this is EU policy, as it too has further worked to shape German initiatives in respect to green industry. For example, shifts in EU policy helped to spur a growth in the wind turbine industry in Germany. Seeking a more liberal energy market, the EU established its renewable energy promotion directive, which influenced Germany to update its own energy policies by amending the Energy Industry Act (EnWG) in 1998.¹⁷⁰ This amendment had a significant impact on Germany's investment into such technologies as it started a new era of wind power generation in Germany, as seen through increased employment in the sector (15,600 people in 1998 vs. 53,200 in 2002) and heightened government funding established through the feed-in tariff system that was established to help support the growing industry.¹⁷¹

Later, international influences were seen to have pushed German environmental policy beyond the industrial level. For instance, the UN Conference on Environment and Development, held in Rio de Janeiro in 1992, was a noteworthy step forward in Germany's path towards environmental state status. This conference resulted in several important developments, including the Convention on Biological Diversity (CBD). Initially, Germany was opposed to the

¹⁶⁸ Ibid.

¹⁶⁹ Konrad Adenauer Stiftung, *History of Environmental Policy in Germany: CDU Perspectives 1958-2015*. Publication. Web. <https://www.kas.de/c/document_library/get_file?uuid=57153b6c-1ac9-6dd4-4048-b7e8732ba709&groupId=252038>.

¹⁷⁰ Bruns, Elke, and Dörte Ohlhorst. "Wind Power Generation in Germany - a Transdisciplinary View on the Innovation Biography." *The Journal of Transdisciplinary Environmental Studies* 10.1 (2011): 46-67. Web.

¹⁷¹ Ibid.

CBD, which required the establishment of national strategies on the protection of biodiversity.¹⁷² Despite this initial hesitation however, Germany, along with other states such as Japan, eventually supported the CBD in order to uphold their national images as leaders and active participants in the environmental regime.¹⁷³ Since signing onto the CBD, Germany has made significant investments at home and abroad in order to follow through with its commitments to this convention. For example, domestically Germany has set targets in its National Strategy on Biodiversity (NBS) to reserve 2% of its land as extensive wilderness areas and 5% as woodlands protected from use and development.¹⁷⁴ Recently, this has resulted in the establishment of new national parks such as the Black Forest in 2014 and Hunsrück-Hochwald in 2015; funding to support such initiatives has been directed from a variety of sources including R&D programs and flood protection programs.¹⁷⁵ Additionally, in accordance with the CBD, Germany has sent considerable funds abroad to help promote similar initiatives (approximately 500 million euros per year since 2013).¹⁷⁶

While we mentioned the role that some activists played in pushing the establishment of protected areas, the further expansion of such areas has been greatly stimulated by international influences. For example, even though the government has taken an interest in pursuing such an expansion however, large portions of the public have in the past pushed back against such efforts. Many efforts to establish natural protected areas have mostly been supported by

¹⁷² Chasek, Pamela S., David Leonard Downie, and Janet Welsh Brown. *Global Environmental Politics*. Boulder, CO: Westview, 2017. p. 25. Print.

¹⁷³ Ibid. p. 58

¹⁷⁴ Schumacher, H., P. Finck, U. Riecken, and M. Klein. "More Wilderness for Germany: Implementing an Important Objective of Germany's National Strategy on Biological Diversity." *Journal for Nature Conservation* 42 (2018): 45-52. Web.

¹⁷⁵ Ibid.

¹⁷⁶ Federal Ministry for Economic Cooperation and Development & Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, *Committed to Biodiversity: Germany's International Cooperation in Support of the Convention on Biological Diversity for Sustainable Development*. Publication. n.d. Web. <<https://www.cbd.int/financial/2017docs/germany-commitment2016.pdf>>.

administrative officials at the federal level, while private actors such as the Federal Association of Persons Concerned by National Parks (*Bundesverband der Nationalparkbetroffenen*) have in many cases organized against these advancements.¹⁷⁷ Such opposition was seen through public demonstrations in areas such as *Uckermärkische Seen* nature park, which led to the burning of park equipment and the blatant disregard of protective regulations enforced in the area.¹⁷⁸

After considering these advancements, the role of the international environmental regime in steering German environmental policy developments is quite clear. From the origins of Germany's first environmental initiatives, to its current initiatives regarding land management and sustainable development, international influences have clearly been a driving force behind Germany's environmental progress. By driving such developments, international agenda setting, MEA's and institutions have all aided in initiating a process through which Germany's government has strengthened its environmental state apparatus.

III. The Chinese Case in an International Perspective

China's Position at the International Level

It is hard to overlook the fact that China has especially felt the impact of international forces on its environmental state development. Ever since Deng Xiaoping's efforts to open up the country began decades ago, the economic and social landscapes of this nation have been significantly shaped by the outside world. Rising as an economic, social and political power, China has had to maneuver a complex set of international institutions and norms. As such, analyzing any form of its development would not be complete without a consideration of the impact that the international landscape has had on its domestic character.

¹⁷⁷ Stoll-Kleemann, Susanne. "Opposition to the Designation of Protected Areas in Germany." *Journal of Environmental Planning and Management* 44.1 (2001): 109-28. Web.

¹⁷⁸ Ibid. p. 116

Building off of the influence of political legitimacy maintenance, the impact that energy security has had on motivating the Chinese government to increase its investments in green industry will be considered as it was in the German case. Additionally, international conferences and conventions have directly influenced the growth of environmental policy in China, as noted by top government officials such as Wang Yuqing.¹⁷⁹ Because of this, they too will provide useful insight into the process of environmental state formation in China.

Access to Energy Resources

As with Germany, we must consider the history of China's energy needs along with its access to resources in order to more fully understand the effects that the international landscape has had on the environmental state. As China has undergone rapid industrialization and urbanization, its energy demands have skyrocketed and will continue to do so well into the foreseeable future. This has resulted in a 9.98% growth rate in energy demand between 2002 and 2010, one of the highest energy demand growth rates in the world.¹⁸⁰ While this represents tremendous economic success, it also presents a major problem. Domestically, China has access to a variety of natural resources such as coal and oil, however, these have become insufficient to meet the needs of the economy and society today. In 2012, oil and coal accounted for 66% and 20% respectively of China's energy usage.¹⁸¹ With coal however, the government had decided by 2015 that it would cap coal's share of total energy consumption at 63% by 2020 in order to

¹⁷⁹ Heggelund, Gørild, and Ellen Bruzelius Backer. "China and UN Environmental Policy: Institutional Growth, Learning and Implementation." *International Environmental Agreements: Politics, Law and Economics* 7.4 (2007): 415-38. Web.

¹⁸⁰ Jiang, Zhujun, and Boqiang Lin. "China's Energy Demand and Its Characteristics in the Industrialization and Urbanization Process." *Energy Policy* 49 (2012): 608-15. Web.

¹⁸¹ U.S. Energy Information Administration, *International Energy Data and Analysis - China*. Rep. 14 May 2015. Web. <<https://www.eia.gov/beta/international/analysis.php?iso=CHN>>.

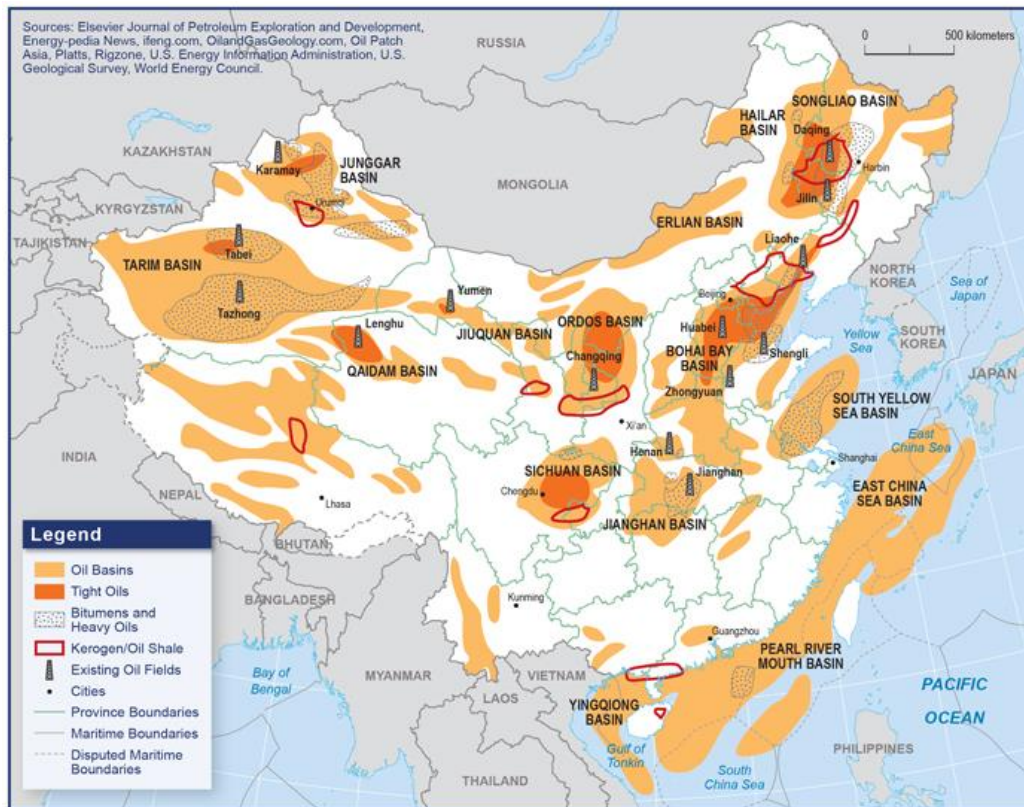
help tackle the thick smog that was chocking urban areas (relating back to the previous chapter on legitimacy).¹⁸²

Because of this, China has attempted to expand its domestic oil production but this too has proven difficult. Going back to the 1950's, successful exploration of oil fields allowed China to enjoy decades of energy independence, a trend lasted until 1993 when China became a net importer of oil.¹⁸³ While the state has continued its efforts to grow domestic oil production, it has encountered many roadblocks as many of its major onshore oilfields are located either in densely populated eastern regions or geographically inaccessible western regions and new offshore drilling operations are restricted by territorial disputes in the South China Sea and East China Sea, as seen in the following map.¹⁸⁴

¹⁸² Ibid.

¹⁸³ Gordon, Deborah, Yevgen Sautin, and Wang Tao. "China's Oil Future." *Carnegie Endowment for International Peace*. 06 May 2014. Web.

¹⁸⁴ Ibid.



*Map 5.1: China's Domestic Oil Resources.*¹⁸⁵

Due to this incredible increase in energy demands and insufficient domestic resources, China began in the early 2000's to look towards investment in foreign oil sources; in these efforts, the character of the international landscape significantly shaped China's choices and the eventual outcomes. For example, the initial investments in foreign oil that China intended to make were confined to a limited number of countries, as Western companies already prominent in many of the top oil producing states made access to resources too competitive. This then resulted in a focus on countries which had been subjected to Western sanctions in which Western companies were unable to operate, namely Iraq, Iran, Sudan, Russia and Venezuela. The effectiveness of these efforts however, have been quite questionable as US led sanctions against

¹⁸⁵ Ibid.

Russia have resulted in substantial losses for Russian oil companies that China has invested in. This uncertainty is made worse by the spread of political instability in many of the other countries China relies on for oil exports. For instance, the investments China has made in foreign oil sources have been limited in their returns due to such incidents as the bombing of oil facilities by Arab separatist groups in Iran, civil wars in Sudan, and attacks on Chinese employees in many other African countries. On top of this is the looming threat of dwindling oil supplies in relatively stable areas where China has invested such as the Kurdish region in Iraq.¹⁸⁶

From these troubles, the energy policies pursued by the Chinese can be seen to have been highly dependent on a variety of international pressures, including political instability, violence, and sanctions. In order to reduce the vulnerability of China's energy demands to such forces, China has been seeking other means through which it can increase its energy independence. Solar power for instance, has been a focus of China's new energy policies as it offers a shield from international uncertainty. It is estimated that between 2008 and 2018 China has invested up to 47 billion dollars in solar panel manufacturers through a variety of tax credits and loans; the success of such efforts is manifested in the 125 gigawatts of installed solar power (as compared with 40 in Germany) and the 51 gigawatt / year manufacturing capacity of Chinese photovoltaic cell producers.¹⁸⁷ Additionally, the International Energy Agency for example, has noted that China is on track to invest over 6 trillion dollars in green energy technologies by 2040 and currently creates around 24% of its energy from renewable sources, 9% more than that of the United States; this success is bolstered by other similar investments such as massive subsidies for electric vehicles (ten times more than the US).¹⁸⁸ In this way, China has improved its standing as

¹⁸⁶ Jaffe, 2018

¹⁸⁷ Ibid.

¹⁸⁸ Jaffe, 2018

an environmental state through large commitments of funds towards technologies that work to advance environmental protection efforts. These commitments were catalyzed by shifts at the international level and showcase the role of international economic and political forces in the environmental state development process.

Global Environmental Regime

Adding to this process is the influence of the growing environmental regime on China's behavior. Like Germany, China's actions at the domestic level have been significantly impacted by international agenda setting and a growing framework of MEA's and international institutions which have worked to shape China's political and economic rise. While China has not historically been a lead state in international environmental treaties, its participation is still worthy of consideration. Looking back to the origins of the environmental state in China, some of the first national level actions regarding environmental protection were influenced by the growing international environmental regime.

For example, the Stockholm Conference on the Human Environment in 1972 was effective in international agenda setting and, while China was at times confrontational in this setting, the real bureaucratic and policy expansion that laid the groundwork for the environmental state originated in large part from the influences of this conference.¹⁸⁹ From its experience in Stockholm, Chinese policy makers were made aware of the complexity of environmental issues that were on the rise in both developed and developing countries around the world and, in conjunction with rising domestic conflict surrounding such issues as water pollution, inspired the start of modern environmental protection efforts in China; the first national environmental protection conference was subsequently held in China the following year

¹⁸⁹ Jahiel, Abigail R. "The Organization of Environmental Protection in China." *The China Quarterly* 156 (1998): 757-87. Web.

in 1973 and from this conference, important advancements were made in China's regulatory and administrative environmental state apparatuses.¹⁹⁰ Largely, this resulted in a period of top-down, command-control strategies imposed by the government aimed at mitigating end-of-pipe water and air pollutants, and was kicked off by the creation of the National Environmental Protection Agency.¹⁹¹ On top of this administrative expansion, knowledge based structures were created in order to supplement and inform the growing environmental governance apparatus such as the China Environmental Science Academy in 1978.¹⁹²

Following this initial period in which the international environmental regime was seen to have helped jumpstart Chinese environmental state growth, advancements in the regime increasingly guided and shaped the policy decisions of the Chinese government. As was the case with Germany, a major trend in the regime which guided China's growth was that of sustainable development and the rising emphasis on market friendly solutions to environmental issues. The rise of this paradigm in global environmental politics came about for a variety of reasons, among which was the clash between the Global North and Global South. Many in the Global South (such as China) were hostile towards international efforts to curb environmentally deleterious growth, as they were just starting to reap the benefits of economic growth and industrialization; in order to accommodate the interests of both parties, a UN commission released the Brundtland Report in 1987, which laid out a strategy built upon sustainable development and the merging of market and environmental interests.¹⁹³ Eventually, this led to such developments as the internalization of environmental issues within global financial institutions such as the WTO,

¹⁹⁰ He, Guizhen, Yonglong Lu, Arthur P.j. Mol, and Theo Beckers. "Changes and Challenges: China's Environmental Management in Transition." *Environmental Development* 3 (2012): 25-38. Print.

¹⁹¹ Ibid. p. 30

¹⁹² Child, John, Yuan Lu, and Terence Tsai. "Institutional Entrepreneurship in Building an Environmental Protection System for the People's Republic of China." *Organization Studies* 28.7 (2007): 1013-034. Web.

¹⁹³ Chasek, p. 312

which created its own Committee on Trade and Environment in 1994.¹⁹⁴ In these ways, the liberalization of the global environmental regime had taken hold and, as the epitome of a developing state rising through this global framework, China was significantly affected.

The conference in Rio exemplified this newfound emphasis on sustainable development and, like Germany, China's participation had a noticeable effect on its domestic actions. Prior to Rio, China was undergoing a period of political and economic opening, in which the government sought to move away from its previously isolationist stance and become more politically and economically engaged in the global community; after international condemnation following Tiananmen Square stalled these efforts, China viewed Rio as an opportunity to improve its international standing.¹⁹⁵ Immediately following China's involvement in this conference and its acceptance of the resultant Agenda 21, a shift in Chinese policy to include measures for sustainable development began.¹⁹⁶ This resulted in a variety of regulatory and bureaucratic advancements which started with the inclusion of Agenda 21 goals into the Ninth National Five-Year Plan.¹⁹⁷ In order to implement the plan, China established multiple advisory bodies including the China Council for International Co-operation on Environment and Development (CCICED) in 1992 during the conference and the ACCA 21 as an administrative center in 1993.¹⁹⁸ Additionally, while these cases of bureaucratic growth were surely significant in this process, it was NEPA which took on the bulk of the responsibilities regarding the implementation of Agenda 21 and this was, in part, responsible for NEPA's upgrade to SEPA in 1998 as it added greatly to the scope of the agency's responsibilities.¹⁹⁹

¹⁹⁴ Ibid. p. 328

¹⁹⁵ Heggelund, 2007

¹⁹⁶ He, p. 32

¹⁹⁷ Heggelund, 2007

¹⁹⁸ Ibid.

¹⁹⁹ He, p. 32

Additionally, China's position as a developing country has in some cases incentivized participation in the environmental regime. For example, China signed onto the Montreal Protocol as it included provisions for financial assistance to help phase out the use of CFC's.²⁰⁰ On top of this, the CDM required further bureaucratic expansion as it brought together a host of government ministries and officials to form various boards and committees responsible for the approval of project requests and program implementation. Some preexisting agencies such as the NDRC were required to take on the duties associated with the creation of these projects (the NDRC was chosen as the Designated National Authority for China's CDM which means that it ultimately receives and approves project applications).²⁰¹ While the NDRC was tapped for this role in the CDM, other bodies were formed around it in order to establish an effective administrative structure. To oversee this structure, the National Leading Group on Climate Change was created in 2007 in order to ensure the overall functions of CDM in China, and under it, the National CDM Board and National CDM Fund Board were created, consisting of members of the NDRC and other bodies such as the Ministry of Finance.²⁰² In recent years, China has expanded the scope of its development efforts by building off of CDM's legacy to establish the Chinese Certified Emission Reduction Market as its own domestic trading scheme.²⁰³

Adding to these efforts, the WTO has aided China's efforts to implement sustainable development in line with the global regime. For instance, the institution has recognized ISO (International Organization for Standardization) standards which work to promote and certify

²⁰⁰ Schreurs, Miranda A., and Elizabeth Economy. "Domestic and International Linkages in Environmental Politics." *The Internationalization of Environmental Protection*. Cambridge: n.p., 1997. 1-18. Web.

²⁰¹ World Bank, *The Clean Development Mechanism in China: Five Years of Experience (2004-09)*. Publication. Washington D.C., 2010, pp. 18-19, Web.

²⁰² Ibid.

²⁰³ Lo, Alex Y., and Ren Cong. "After CDM: Domestic Carbon Offsetting in China." *Journal of Cleaner Production* 141 (2017): 1391-399. Web.

clean production methods and products.²⁰⁴ As a result, China's accession into the WTO incentivized Chinese companies to follow these environmental standards and change their production patterns to comply with Chinese state initiatives, such as the China Environmental Labeling Program.²⁰⁵ ISO 40001 standards also specify that companies must comply with the domestic environmental regulations relevant to their industry.²⁰⁶ This then aids in China's efforts to build compliance with their environmental regulatory framework, thus strengthening its environmental state capacity.

Furthermore, while in the previous chapter we noted the importance of land management for the maintenance of legitimacy, it is mainly due to international influences that the protection of land resources was furthered through the establishment of protected areas. As with Germany, the global environmental regime added to the Chinese state responsibility of nature preservation through such conventions as the CBD. While protected areas had previously been established in China, these areas were not strictly protected and were mainly characterized by hunting and logging bans to protect nationally symbolic animals such as the giant panda.²⁰⁷ Upon signing onto the CBD in 1993 however, China's commitment to these protected areas was significantly increased as the first major regulations regarding these areas were created, as established in the Regulations of the People's Republic of China on Nature Reserves in 1994.²⁰⁸ The increase in the regulatory framework regarding the protection of natural areas set the stage for a considerable increase in the size and scope of these protected areas, which today make up about

²⁰⁴ Conway, Tom. *ISO 14000 Standards and China: A Trade and Sustainable Development Perspective*. Working paper. International Institute for Sustainable Development, 1996. Web. <<https://www.iisd.org/pdf/isochina.pdf>>.

²⁰⁵ He, 2012

²⁰⁶ Conway, p. 22

²⁰⁷ Zhang, Lyubing, Zhenhua Luo, David Mallon, Chunwang Li, and Zhigang Jiang. "Biodiversity Conservation Status in China's Growing Protected Areas." *Biological Conservation* 210 (2017): 89-100. Web.

²⁰⁸ Ibid.

17% of China's total land area.²⁰⁹ Following this was the Natural Forest Conservation Program (NFCP), established in 1998 which led to the creation of the Center for Natural Forest Conservation and Management and the training of over 700 forestry officials around the country.²¹⁰ This represented a considerable devotion of resources as the state spent 500 million dollars in 1998 on the NFCP and increased this number to 875 million by 2000; the establishment of these natural areas has also provided a basis for the expansion of knowledge based structures as it has required the technical training of officials and local peoples for forest maintenance along with providing sites for learning and research.²¹¹

IV. Conclusion

As the world continues to undergo the process of globalization and as states are increasingly viewed in the context of the international community, so too must environmental states be analyzed in this context. While the environmental state is usually considered in terms of advancements made at the domestic level, we have shown in this section that these domestic advancements have been both shaped and caused by the international landscape. Through a comparison of Germany and China, the importance of energy security was noted. Both share the quality of being largely dependent on foreign sources of energy. From this connection, similar outcomes in terms of boosting domestic spending and administrative capacity to build energy security through green investments emerged. Likewise, Germany and China both have been subject to a growing international environmental regime. Motivated by efforts to emerge as internationally integrated states, both nations underwent significant changes to conform to the

²⁰⁹ Ibid.

²¹⁰ Zhang, P. "ECOLOGY: China's Forest Policy for the 21st Century." *Science* 288.5474 (2000): 2135-136. Web.

²¹¹ Ibid.

new international norms and initiatives. This then helped in advancing domestic policies regarding industrial efficiency, land management / protection, etc.

In these ways, international influences have helped to steer environmental state growth in line with Duit's framework of administrative, regulatory, financial and knowledge based structures. As shown in the example of WTO policies, these influences have also aided in boosting enforcement in China. Any progress in terms of enforcement in China is noteworthy, as a lack of enforcement is, as previously noted, a major hindrance to China's full-fledged environmental state status. Viewing these states from an international perspective has therefore proved useful in identifying a variety of causes for environmental state growth in both China and Germany. On top of this, it has added to the previous chapter on political legitimacy in highlighting a prominent trend in this research. Specifically, this trend revolves around the evolution of sustainable development as a dominant theme in environmental state formation. This is important to note moving forward as the process of ecological modernization, kicked off by the advancements mentioned in this chapter and the previous chapter, will be considered in its role as a catalyst of environmental state formation.

Chapter 6: Ecological Modernization as a Catalyst for Environmental State Growth

I. Introduction to Ecological Modernization Theory

Relevance and Nature of Ecological Modernization Theory

From the previous chapters on civil society, political legitimacy, and international influences we have seen that many state led initiatives aimed at tackling environmental issues in Germany and China have involved policies intended to steer technological innovations and market-adjustments. Springing from the environmental state formation processes that the factors covered in the previous chapters have produced, these developments point to the growing role that ecological modernization has played in both states. As such, ecological modernization has been inherently intertwined throughout the dynamics we have covered so far and must be further considered in our analysis. By providing more clarity on what ecological modernization actually is and how it has played out in Germany and China, more environmental state effects will be uncovered and this then will help to shed more light on the reasons as to why similar outcomes have been noted between both states.

First, in order to fully understand the ability of ecological modernization theory to explain the similarities in German and Chinese environmental state development, we must delve further into the the history and nature of this theory. In short, this theory is built upon the idea that environmental protection does not have to run counter to capitalist, market forces of growth and consumption; as a result, it has been described by many as essentially a “green capitalist” theory.²¹² It identifies the environment not as a hindrance to economic development but rather as a new economic arena in which innovation, jobs, profits, and new markets can be found.²¹³ In

²¹² Ewing, Jeffrey A. "Hollow Ecology: Ecological Modernization Theory and the Death of Nature." *Journal of World-Systems Research* 23.1 (2017): 126-55. Web.

²¹³ Meadowcroft, p. 70-71

these ways, it is an analytical framework aimed at describing the efforts of industrialized nations in solving their environmental issues. Its history as a sociological theory goes back to the early 1980's in Germany, making it especially relevant to this study.²¹⁴

Specifically, the theory is focused on social and institutional changes in states related to environmental governance. A main concern of the theory is industrial adaptation as it sees this as the best way to solve our current environmental crises, however the role of the government is also critical as policy is considered a key driver of this type of change.²¹⁵ These modifications can be framed by five key assumptions or predictions of an ecologically modernizing state: (1) the role of science and technological advancements will change and become looked to as solutions to environmental degradation rather than as causes of these issues, (2) a strengthened relationship between market forces/actors and environmental protection efforts, (3) changes in the role and character of the nation state including more decentralized governance/management, (4) social movements becoming more central to environmental governance, (5) fundamental shifts in national beliefs regarding the relationship between the environment and the economy, so that neither is looked to as the sole area of importance.²¹⁶ These predictions will be important to consider moving forward.

Analyzing the Influence of Ecological Modernization in Environmental State Formation

While the relevance that ecological modernization has maintained throughout our study so far has been made clear, it is important now to highlight some of the ways in which this process can drive environmental state growth. As a dominant discourse in environmental politics

²¹⁴ Fisher, 2001

²¹⁵ Rudel, Thomas K., J. Timmons Roberts, and JoAnn Carmin. 2011. "Political Economy of the Environment." *Annual Review of Sociology* 37: 221-38.

²¹⁶ Mol, Arthur P.j., and David A. Sonnenfeld. "Ecological Modernisation around the World: An Introduction." *Environmental Politics* 9.1 (2000): 1-14. Web.

today, the historical expansion of its influence goes back decades as is evident in the environmental policy development of a range of actors from European states to Asian countries such as Japan, along with organizations such as the then European Community (EC).²¹⁷ Therefore, at the same time that the initial steps many states were taking to deal with their environmental problems, states were also laying the groundwork for a political and economic environment conducive to eco-modernization. In this way, ecological modernization has pushed in many developed states to further industrial development, growth and innovation.²¹⁸ While this may seem like a dependency on the private sector, a successful implementation of eco-modernization strategies depends upon a significant regulatory framework aimed at steering the desired results in such areas as renewables, biotech and other innovative sectors of the economy.²¹⁹

The extent to which these advancements are made can broadly be categorized as either weak or strong ecological modernization. Weak eco-modernization is mainly a basic form of the political and economic changes that we have reviewed so far. In this form, there are rudimentary policy initiatives aimed at incentivizing the industrial and economic practices which allow for more efficient and environmentally friendly modes of production and consumption.²²⁰ Strong eco-modernization differs in that it implies a more concerted effort by the state to change existing economic, social and political systems so that they are more sustainable and environmentally conscious.²²¹ In this way, it is more strictly aligned with the five assumptions noted earlier, especially insofar as it implies discursive advancements within government and

²¹⁷ Hajer, Maarten A. *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process*. Oxford: Clarendon, 2010. Web.

²¹⁸ Fisher, 2001

²¹⁹ Barry, 2005, p. 260

²²⁰ Ibid. pp. 262-263

²²¹ Ibid. p. 263

society which tie the environment and the economy as codependent interests.²²² In both weak and strong eco-modernization however, you would see at least some level of expansion among the four components of Duit's environmental state framework, as eco-modernization in general requires regulation, money, some sort of administrative oversight, and knowledge based structures that aid in innovation.

Ecological modernization as a widespread outlook in environmental politics is therefore, an important factor to consider in the creation of today's environmental states. As such, the role it has played in both Germany and China will be compared. As was done with the factors covered in the previous chapters, the link between ecological modernization and the environmental state in each case will be shown. This will be accomplished through the application of the theory's five previously mentioned assumptions to policies and initiatives enacted within the German and Chinese states. A key area of consideration in this application will be industrial advancements as eco-modernization is based on the presumption of green industry growth. As such, economic actors will be a major aspect of analysis, specifically in regards to efforts at increasing the efficiency of industrial output and economic activity, along with the growth of new, green industries. This will be done in conjunction with a consideration of broader social impacts of ecological modernization such as changing perspectives and the adapting roles of social movements and government.

From the application of these assumptions, the presence of ecological modernization as an influential factor in each state's environmental policy will be identified. The results of this relationship, borne out through such indicators as legislative advancements, devotion of funds

²²² Howes, Michael, et al. "Adapting Ecological Modernisation to the Australian Context." *Journal of Integrative Environmental Sciences*, vol. 7, no. 1, 2010, pp. 5–21. Web.

and bureaucratic growth, will then show the explanatory value of ecological modernization in environmental state growth. Building off of the previous chapters, we will now further identify the extent to which both China and Germany have undertaken ecological modernization and the effects that this has had on strengthening their environmental state structures. We will do so both in the context of these effects as results of previously explained processes and as, in and of themselves, catalysts for further environmental state expansion.

II. Ecological Modernization and German Environmental State Development

Evidence of Ecological Modernization's Influence in Germany

As will be explained, many of the attributes that Germany and China share today as environmental states point to similar origins in ecological modernization. These origins however, go back further in Germany than they do in China. An example of this can be seen in the inclusion of the precautionary principle (*Vorsorgeprinzip*) into German environmental policy in the 1970's. Essentially, the precautionary principle advocates for multiple changes to existing environmental policy including the early detection of and responses to environmental issues (as opposed to reactionary measures taken after the fact), along with state promotion of and investment in pollution cutting technological adaptations.²²³ In this interpretation of the precautionary principle, multiple assumptions of ecological modernization theory can be identified. For instance, this can be seen in the focus on preventative rather than reactionary policy measures as, looking back to the key assumptions of ecological modernization theory highlighted by Mol, this focus aligns with the fifth assumption of changing perceptions. Furthermore, "pollution prevention pays" has been noted to be a major theme of ecological

²²³ Boehmer-Christiansen, Sonja. "The Precautionary Principle in Germany - Enabling Government." *Interpreting the Precautionary Principle*. By Timothy O'Riordan. London: Earthscan Publications, 1993. 31-37.

modernization and is related to the value of precautionary policies in preventing future costs.²²⁴

The prevalence of such an idea in the precautionary principle thus underscores the role that ecological modernization has played in these policy changes, as the inherent cost savings therefore exemplify the merging of the economic and environmental realms and the end of the dichotomy in which one was thought to be dominant over the other.

While it is clear that the inclusion of the precautionary principle in the guiding outlooks of German policy demonstrates the influence of ecological modernization theory, more must be uncovered in order to highlight its explanatory value in German environmental state growth. For example, the influence of the precautionary principle in German climate and air pollution policy gives more necessary insight into the role that ecological modernization has played as a response to factors mentioned in previous chapters. This was seen through the adoption of precautionary policy measures following both the oil price crises of 1973 and 1979 and increase of acid rain that resulted in the onset of political debate surrounding air pollution control and the subsequent adoption of precautionary policy measures.²²⁵ As a result, the 1980's saw the introduction of groundbreaking policies which brought about the rise of new technologies and an "abatement industry", the inclusion of a risk-averse strategy into mainstream political discourse, and evidence of higher employment and industrial modernization.²²⁶ As such, with the precautionary principle as a dominant force in German policy making, green growth driven by technological adaptations has not only been Germany's response to international and domestic pressures but has also been influential in its own right through the new markets and economic opportunities that it created.

²²⁴ Schlosberg, David, and Sara Rinfret. "Ecological Modernisation, American Style." *Environmental Politics* 17.2 (2008): 254-275. Web.

²²⁵ Weidner, p. 358

²²⁶ Ibid. p. 360

A major tactic in this eco-modernization strategy can be seen through eco-innovation initiatives (which are widespread throughout the European Union). Eco-innovation, defined as “any innovation that reduces the use of natural resources and decreases the release of harmful substances across the whole life-cycle” has been measured by an index which offers an aggregate of five sub-indexes, those being socioeconomic outcomes (employment, exports, etc.), resource efficiency outcomes (levels of resource use and emissions productions), eco-innovation inputs (investments), eco-innovation activities (levels of company participation), and eco-innovation outputs (patents, literature, media, etc.).²²⁷ Germany has been a leader in Europe according to this index as it has ranked consistently within the lead group of states, even topping this group as the highest ranked eco-innovator state in 2016.²²⁸

Country	Eco-Innovation Index Score 2016
Germany	140
Luxembourg	139
Finland	137
Denmark	126
Sweden	115
United Kingdom	110

*Table 6.1: Eco-Innovation Index Scores for European States.*²²⁹

Aside from simply precautionary measures aimed at making industrial growth less harmful and prevent further degradation, Germany has sought eco-modernization for competitive purposes. This motivation has been seen through the expanding opportunities in new markets throughout the world. For example, Germany has made a concerted effort through such

²²⁷ Giljum, Stefan, Mirko Lieber, and Asel Doranova. *EU Eco-Innovation Index 2016*. Rep. N.p.: Eco-Innovation Observatory, 2017. Web.

²²⁸ Ibid. p. 3

²²⁹ Bahn-Walkowiak, Bettina. *EIO Country Brief 2010: Germany*. Rep. N.p.: Eco-Innovation Observatory, 2010. Web.

initiatives as the High-Tech Strategy started in 2006 to become a lead state in technologies relating to solar energy, water management, resource efficiency and brownfield management.²³⁰ As a result of this focus on the economic opportunities associated with ecological modernization, Germany has seen success in the growing international market for environmental technologies. In 2006 (even before furthering its commitment through such programs as the High-Tech Strategy) Germany accounted for 16.1% of the global market share of environmental technologies, while competitors such as the US and Japan accounted for 14.9% and 9.2% respectively.²³¹ This then adds another dimension to the influence of ecological modernization Germany, as green development is becoming not only a practical means of environmental protection but also an important part of Germany's broader economic goals.

With these developments in mind, it is clear that ecological modernization has had a long history of influence in Germany. The precautionary principle was grounded in what would later become core aspects of the newly developed theory in the 80's, and Germany then embarked on a path of technological innovation in order to further the goal of sustainable growth so that it may deal with its environmental issues in an economically feasible and lucrative way. Following this relationship, the focus must now shift to the effects that these developments have had on Germany's environmental state growth.

Effects on the German Environmental State

As ecological modernization has been a pervasive theme in Germany's fight for environmental protection, its development in Germany has been intertwined with that of the environmental state's. For example, Germany's eco-modernization efforts have aided in the strengthening of its environmental laws and regulatory framework. In 1991, the Electricity Feed-

²³⁰ Bahn-Walkowiak, p. 11

²³¹ Ibid. p. 3

In Act (StrEG) came into effect, introducing for the first time in Germany a feed-in tariff system through which government would help to support the costs of investing in renewable energy ...

²³² The Recycling and Waste Management Act of 1994 incentivized the increased recycling and efficient use of resources while the Renewable Energies act of 2000 was critical in building the use of green energy in electricity production.²³³ 1996 also saw the Closed Substance Cycle and Waste Management Act which has become a model for landmark green development legislation in other states, such as the Circular Economy Promotion Law in China (more on this later).²³⁴

A strengthened legal framework has been followed by substantial increases in state funding towards environmental innovation and industrial greening. As pointed to earlier, the influence of precautionary policies grounded in ecological modernization was critical in establishing an “abatement industry” centered on increased research and development of pollution cutting technologies. This was seen between 1974 and 1982 when public R&D funding for renewable energy increased from 20 million to 300 million DM.²³⁵ Likewise, between 1979 and 1985, environmental related R&D increased to 3.1 percent of total public R&D expenditures in Germany, highlighting a growing trend of increased public investments made towards green industry.²³⁶ In 2008, the amount of funding that went towards environmental and energy R&D equaled 0.5% of Germany’s GDP, as compared to the EU average of 0.4%; “cleantech” projects, largely focused on green energy technologies, received a total of 724.12 million euro’s in

²³² Mabee, Warren E., Justine Mannion, and Tom Carpenter. "Comparing the Feed-in Tariff Incentives for Renewable Electricity in Ontario and Germany." *Energy Policy* 40 (2012): 480-89. Print.

²³³ Bahn-Walkowiak, p. 8, 18

²³⁴ Mathews, John A., and Hao Tan. "Progress Toward a Circular Economy in China." *Journal of Industrial Ecology* 15.3 (2011): 435-57. Web.

²³⁵ Laird, Frank N., and Christoph Stefes. "The Diverging Paths of German and United States Policies for Renewable Energy: Sources of Difference." *Energy Policy* 37.7 (2009): 2619-629. Web.

²³⁶ Weale, Albert. "Ecological Modernisation in Britain and Germany." *The New Politics of Pollution*. Manchester: Manchester UP, 1993. p. 84. Web.

funding between 2007 and 2009, and at that time employed over 300,000 people.²³⁷ Through such investments of public funds, the German government has played an active role in the management of sustainable development.

In conjunction with this increased funding, bureaucratic expansion has resulted in order to effectively oversee the efforts to eco-modernize Germany. Going back to 1993, this trend was seen in the creation of the Agency for Renewable Resources (*Fachagentur Nachhaltende Rohstoffe* – FNR), which today has a staff of about 120 and oversees projects in support of renewable resource research and development under the supervision of the Federal Ministry of Food and Agriculture (*Bundesministerium für Ernährung und Landwirtschaft* – BMEL).²³⁸ Bureaucratic growth was further seen in 2007 when the German Material Efficiency Agency was created to support the improvement of companies' material efficiency; yet another agency, the German Mineral Resources Agency (*Bundesanstalt für Geowissenschaften und Rohstoffe* – DERA), was created for supporting research and technological advancements to ensure sustainable development and resource use.²³⁹

On top of this, the inclusion of environmental concerns into state functions like tax collection has resulted from the increasing influence of ecological modernization in Germany. A prime example of this is the Ecological Tax Reform Act passed in 1999 by the Green-SPD coalition government of that time.²⁴⁰ While there were many reasons for the introduction of this new 'eco-tax', the main considerations of advocates were the decrease in fossil fuel consumption and subsequent incentives for green innovation in German industry that it would create.²⁴¹ The

²³⁷ Bahn-Walkowiak, pp. 5-6

²³⁸ International Fachagentur Nachhaltende Rohstoffe, "Information About Fachagentur Nachhaltende Rohstoffe." E. V., Web. <http://www.fnr.de/fileadmin/allgemein/pdf/broschueren/Infoflyer_FNR_2018_englisch_Web.pdf>

²³⁹ Bahn-Walkowiak, pp. 16-19

²⁴⁰ Mehling, Michael, Ralph Buehler, Arne Jungjohann, and Melissa Keeley. "How Germany Became Europe's Green Leader: A Look at Four Decades of Sustainable Policymaking." *Solutions* 2.5 (2011): 51-63. Web.

²⁴¹ Mehling, Michael. "Germany's Ecological Tax Reform: A Retrospective." *Environmental Sustainability in Transatlantic*

effects of this tax almost immediately became evident as it aided in reducing consumption of certain types of fossil fuel use and incentivizing the use of green technologies to...For example, the introduction of the tax was followed by the first sustained trend of decreasing gasoline consumption in Germany (consumption decreased by 4.5% in 2000 compared to 1999 and by 3% in 2001 and 3.3% in 2002) which was coupled with the production of and increased demand for more fuel efficient vehicles (between 1998 and 2007, the average liters per 100km used by German cars decreased from 8.6 to 7.6 respectively; 63% of German participants in a study conducted by the *Gesellschaft für Konsumforschung*, a major consumer research organization, were influenced by higher gasoline prices in their purchasing decisions for new cars).²⁴² Therefore, while the overall effectiveness of this tax alone has been debated, it has clearly aided in increasing the role of the environment the collection of revenue by the German state.

III. Ecological Modernization and Chinese Environmental State Development

Evidence of Ecological Modernization's Influence in China

In the previous case it was seen that the historical roots of ecological modernization as a sociological theory originated in Germany and the effects of its influence can therefore, be traced back earlier in time. In contrast, the influence of this theory in China can be considered to have taken hold more recently and will require a consideration of more modern developments in the Chinese government. For this case, these considerations will mainly focus on rhetoric surrounding the ecological civilization and its means of implementation. This analysis will be similar to that of Germany's in its focus on industry.

Perspective: A Multidisciplinary Approach. By Dana M. Elzey and Manuela Achilles. Houndmills, Basingstoke, Hampshire: Palgrave Macmillan, 2013. 91-103. Web.

²⁴² Ludewig, Damian, Bettina Meyer, and Kai Schlegelmilch. *Greening the Budget: Pricing Carbon and Cutting Energy Subsidies to Reduce the Financial Deficit in Germany*. Publication. Washington DC: Heinrich Böll Stiftung, 2010. Web.

Starting with the idea of an ecological civilization, the basis of ecological modernization theory can be seen to have worked its way into the goals and decision making processes that guide Chinese governance. What is an ecological civilization? The idea of this concept as a guiding principle of Chinese policy was introduced in 2007 and is described as "...the ultimate amalgamation of socialism, harmonious society, welfare, development and a sustainable approach to environmental resources."²⁴³ Some believe that the ecological civilization offers a rebuke of capitalism and is instead a vision of postindustrial, eco-socialist society.²⁴⁴ This belief does not hold up however, when the rhetoric surrounding the ecological civilization and the methods of its implementation are compared to the main tenants of ecological modernization. Much of the conversation regarding the ecological civilization is focused on the bridging the gap between economic and environmental goals and creating a paradigm of sustainable growth. Development is not looked to as a hindrance but rather something that must be greened and such terms as sustainable growth and green goods are commonly used in relation to this concept;²⁴⁵ this rhetoric is key as it highlights the green capitalist mantra of ecological modernization.

Furthermore, the efforts of the Chinese government to implement the ecological civilization fit in well with the ecological modernization model. This can be seen, for instance, in the central role that the concept of a circular economy has played in implementation policies.²⁴⁶ Essentially, the idea of a circular economy is based upon the notion that methods of production should become more sustainable and efficient in its use of resources. This is accomplished through such advancements as improved recycling methods and technology. In many ways, as

²⁴³ Hansen, Mette Halskov, and Zhaohui Liu. "Air Pollution and Grassroots Echoes of "Ecological Civilization" in Rural China." *The China Quarterly* 234 (2017): 320-39. Web.

²⁴⁴ Gare, Arran. "China and the Struggle for Ecological Civilization." *Capitalism Nature Socialism* 23.4 (2012): 10-26. Web.

²⁴⁵ China Daily, "China Determined to Advance Ecological Civilization." N.p., 21 May 2018. Web.

²⁴⁶ Jin, Yong. "Ecological Civilization: From Conception to Practice in China." *Clean Technologies and Environmental Policy* 10.2 (2008): 111-12. Print.

others have noted, the main principles of ecological modernization are embedded in the idea of a circular economy.²⁴⁷ A major goal of the circular economy has been to increase the efficiency of energy use in relation to overall economic activity. This is seen through the decrease of energy consumption in relation to GDP. For example, in the first three quarters of 2018, total energy consumption per unit of GDP decreased by 3.1% as compared with the previous year.²⁴⁸ This highlights the continuation of a larger trend of increasing efficiency in the Chinese economy; from 2000 to 2017, total energy consumption per unit of GDP (tce / 10000 yuan) fell from 1.47 to 0.57.²⁴⁹

Expanding upon this measurement of energy efficiency for the economy, the government has adopted multiple indicator systems to measure the implementation of the circular economy and the construction of the ecological civilization. A primary example of this is the index of circular economy development established by the National Bureau of Statistics (NBS). This index takes into account four main indicators, those being waste and emissions intensity, waste and pollution treatment, resource intensity of GDP, and waste recycling; these indicators are each composed of many other sub-indicators that are taken together to quantify progress in these four main categories, which are then compiled themselves into a single CE (circular economy) index value.²⁵⁰ Data compiled between 2005 and 2013 for this index is shown in the following table and exemplifies the recent growth of the circular economy in China based off of improvements in the indicators relative to 2005.

²⁴⁷ Mcdowall, Will, Yong Geng, Beijia Huang, Eva Barteková, Raimund Bleischwitz, Serdar Türkeli, René Kemp, and Teresa Doménech. "Circular Economy Policies in China and Europe." *Journal of Industrial Ecology* 21.3 (2017): 651-61. Web.

²⁴⁸ National Bureau of Statistics of China. *National Economy Stayed Generally Stable with Further Economic Restructuring and Upgrade in the First Three Quarters of 2018*. N.p., 19 Oct. 2018. Web. <http://www.stats.gov.cn/english/PressRelease/201810/t20181019_1628678.html>.

²⁴⁹ China Statistical Yearbook 2018, *1-4 Indicators on National Economic and Social Development*, Web. <<http://www.stats.gov.cn/tjsj/ndsj/2018/indexeh.htm>>.

²⁵⁰ Mcdowall, p. 7

Year	Waste and Emissions Intensity Index	Waste and Pollution Treatment Index	Waste Recycling Index	Resource Intensity of GDP Index	CE Development Index
2005	100.0	100.0	100.0	100.0	100.0
2006	109.2	107.4	102.0	103.4	105.4
2007	115.6	123.2	103.7	109.5	111.9
2008	122.7	136.8	108.0	113.8	118.5
2009	129.9	146.5	112.2	116.3	123.9
2010	136.0	160.9	115.2	121.6	130.2
2011	130.0	163.7	113.9	123.8	129.2
2012	136.8	169.1	112.3	129.2	133.2
2013	146.5	174.6	108.2	134.7	137.6

*Table 6.2: Indicators of CE Development in China.*²⁵¹

The rhetoric supporting the rise of the ecological civilization in China and the focus on such phenomena as the growth of a circular economy therefore, offer evidence of the presence and influence of ecological modernization in China. The establishment of the CE development index and its significant increase between 2005 and 2013 for instance, shows the merging of economic and environmental imperatives along with the increased role of economic actors in the management of such environmental issues as pollution, as it highlights the fundamental belief in green growth. Additionally, the key role that technology plays in increasing the efficiency of industrial activity and the management of wastes is a critical factor in the circular economy and ecological civilization.²⁵² Furthermore, looking back to Chapter 3, civil society organizations focused on environmental issues have been allowed to grow in China but only to the extent that they have been helpful to the government in enforcing regulations on polluters. As such, while it is still clear that there has not been a bottom-up, grassroots push for environmental state developments, the actions of the government can be seen from a top-down approach to have enhanced the role of social movements in environmental governance to its own benefit. The

²⁵¹ National Bureau of Statistics of China, "In 2013, China's Circular Economy Development Index Was 137.6." 2015. Web. http://www.stats.gov.cn/tjsj/zxfb/201503/t20150318_696673.html

²⁵² Jin, 2008

following table sums up the connections made between the ecological civilization in China and ecological modernization.

Ecological Modernization	Ecological Civilization
Importance of science and technology	Key role of technology in increasing energy efficiency of economic activity, reducing / managing pollution, and allowing for green growth
Growing relationship between economic actors and environmental protection	Government policy used to influence companies → companies take a lead role in improving environmental quality
Changes to state organization; more decentralized	Cooperation between many state organizations for greening initiatives; local influence over policies such as env. tax
Social movements more active in environmental governance	Role of the public as watchdogs, aiding in compliance of env. regulations
Perceptions of economy and environment as intertwined social realms	Reconciles economic and environmental imperatives

Table 6.3: Overlap Between Ecological Modernization and the Ecological Civilization

As with Germany, the presence of ecological modernization in China can clearly be seen. With the growth of a circular economy emphasizing industrial efficiency / greening, along with the broader initiative of ecological civilization construction, the core tenants of ecological modernization are clearly evident in the growing efforts to merge environmental protection and economic development. The legal and bureaucratic frameworks that have emerged to help in this process will now be looked to in order to uncover the effects that this has had on China's environmental state.

Effects on Chinese Environmental State Growth

An example of the effect that this has had on China's environmental state can be seen in the passage of the Environmental Protection Tax Law in 2018. This law was a goal of the government going back to 2010 and finds its roots in the government's attempts to supplement its command and control regulations with economic incentives for increased industrial

innovation to boost efficiency and reduce pollutants.²⁵³ While the older system of pollution discharge fees did produce considerable funds for the state (about 2.5 billion dollars in revenue from 280,000 companies in 2015) pollution discharge fees were collected by the environmental protection authorities and compliance was lacking; under the new law, the revenue is collected by the tax authority which carries with it stricter enforcement measures.²⁵⁴ The establishment of this tax also highlights a decentralization of environmental management as more authority is given to the local levels in terms of setting tax rates (for water pollution, a range of tax rates set by the law is .202 to 2.02 dollars per unit of pollution, while for air pollution the range is .173 to 1.73 dollars per unit of pollution) so that the different conditions of each province are taken into account which, along with the shift in revenue collection to the tax authority, aids in enforcement.²⁵⁵ The idea that China is more of a nascent environmental state is grounded in a lack of local enforcement; while the central government has made significant improvements, this has not been reflected throughout country as it has in other environmental states. Because of this, the role of this law in increasing enforcement and tying environmental issues with a core state function of revenue production is a promising sign of growth for China, one driven by ecological modernization.

Furthermore, to further the cause of sustainable growth and a circular economic paradigm, a number of regulatory and bureaucratic advancements have been made. This can be seen, for instance, in the Circular Economy Promotion Law. Taking effect on January 1st, 2009, this law makes clear its eco-modernization origins by stating in the General Principles, “The

²⁵³ Aizawa, Motoko, and Chao-Wei Yang. "Green Credit, Green Stimulus, Green Revolution? China's Mobilization of Banks for Environmental Cleanup." *The Journal of Environment & Development* 19.2 (2010): 119-44. Web.

²⁵⁴ Zhang, Laney. "China: New Law Replacing Pollution Discharge Fee With Environmental Protection Tax." *Law Library of Congress*. Library of Congress, 08 Feb. 2017. Web.

²⁵⁵ Ibid.

development of a circular economy shall be propelled by the government, led by the market, effected by enterprises and participated in by the public....under the precondition of being technically feasible, economically rational, and good for saving resources.”²⁵⁶ This was not the first law with the purpose of incentivizing a circular economy. Before the term was introduced in 1998, similar initiatives were implemented which sought a “comprehensive utilization of resources”, as seen through the Regulations on Strengthening the Comprehensive Utilization of Resources passed in 1985 and the Energy Conservation Law of the People’s Republic of China in 1997.²⁵⁷ Eventually, the circular economy became an explicit goal of policy, as the term was introduced formally by Chinese scholars in 1998 and, in the same year, SEPA was upgraded to ministerial status and soon adopted the circular economy as a strategy to help deal with previously ineffective environmental protection efforts.²⁵⁸ This then led to laws such as the Renewable Energy Law in 2005 and Circular Economy Promotion law in 2015 which worked to make environmental protection a central issue within the manufacturing cycle, so that waste materials are either reused or recycled and energy efficiency is built.²⁵⁹

The evolution of the legal framework surrounding circular economic development also resulted in increased cooperation between bureaucratic bodies. Again, enforcement and compliance have long plagued the Chinese environmental state; these issues have largely been driven by a lack of authority and weak coordination between government organizations.²⁶⁰

²⁵⁶ Law Info China, "Circular Economy Promotion Law of the People's Republic of China." N.p., n.d. Web. <<http://www.lawinfochina.com/display.aspx?id=7025&lib=law>>.

²⁵⁷ Qi, Jianguo, Jingxing Zhao, Wenjun Li, Xushu Peng, Bin Wu, and Hong Wang. "The Role of Government and China's Policy System for Circular Economy." *Research Series on the Chinese Dream and China's Development Path Development of Circular Economy in China* (2016): 21-53. Web.

²⁵⁸ Ibid. p. 28

²⁵⁹ Wen, Hui-Qing, and Jian-Wei Niu. "Legal Guarantee of Green Manufacturing in China Under the Background of Ecological Civilization." *Proceeding of the 24th International Conference on Industrial Engineering and Engineering Management 2018* (2019): 103-09. Web.

²⁶⁰ Jahiel, p. 758

Previously SEPA's responsibility, the NDRC in 2004 took the lead on the management of circular economy implementation programs and this was followed by more comprehensive action plans, such as the Opinions on Accelerating Circular Economy Development issued by the State Council in 2005.²⁶¹ In accordance with this push to accelerate circular economy construction efforts, the National Action Scheme for Pilot Programs for Promoting Circular Economy was jointly created by the National Development and Reform Commission, the State Environmental Protection Administration, the Ministry of Science and Technology, the Ministry of Finance, the Ministry of Commerce, and the National Bureau of Statistics; further evidence of the growth of interagency cooperation can be found in the Catalogue of Waste Electrical and Electronic Products for Disposal issued in 2010 by the NDRC, MEP, and the Ministry of Industry and Information Technology, along with the Circular on Investment and Financing Policies and Measures Supporting Circular Economy Development announced in 2010 by the NDRC, People's Bank of China, the China Banking Regulatory Commission, and the China Securities Regulatory Commission.²⁶² These examples highlight the many steps that China has taken to build a circular economy and ecological civilization. Thus, the influence of ecological modernization in growing a robust regulatory framework and increasing bureaucratic capacity can be seen.

Finally, an important step forward in China's environmental state development came in the form of a constitutional amendment as a result of ecological modernization. That amendment came on March 11, 2018 which marked the inclusion of the term ecological civilization into the Constitution of the People's Republic of China. While the term was already a part of the CPC's constitution, it was not until 2018 that an amendment was added which specifically included it in

²⁶¹ Qi, p. 39

²⁶² Ibid., pp. 38-40

the PRC Constitution. This amendment, the fifth since the adoption of the PRC Constitution, includes in Article 46, “to direct and administer economic affairs and urban and rural development, as well as the building of an ecological civilization.”²⁶³ As noted in our environmental state definition, the inclusion of environmental considerations into the constitution of a state is a fundamental precondition to environmental state status as it sets up the legal basis for necessary for the legislative advancements required for such an achievement. In this case, it bolsters the legal framework for a regulatory system conducive to green development and will help to ensure further advances in line with those mentioned in this section.²⁶⁴ In this way, another building block has been added to the foundation of China’s environmental state, driven by the ecological civilization and the underlying ecological modernization imperatives.

IV. Conclusion

In both Germany and China there has been a significant emphasis placed on the greening of economic activity. In this way, ecological modernization has established itself as a dominant paradigm in each state’s growing environmental protection obligations. Striking similarities can be seen in the goals of Germany and China to tackle their environmental issues in large part through the greening of industrial practices. As ecological modernization theory predicts, the states have pushed such developments as technological innovation efficient production methods to achieve these goals; this has resulted in environmental state growth. Germany saw a direct relationship between eco-modernization initiatives and bureaucratic growth, devotion of public funds, and the strengthening of its environmental legislative / regulatory framework. Likewise, China saw a strengthening of its bureaucracy, fundamental legal advancements through

²⁶³ Zhang, Laney. "China: 2018 Constitutional Amendment Adopted." *Law Library of Congress*. Library of Congress, 18 May. 2018. Web.

²⁶⁴ Wen, 2019

constitutional amendments, and the greening of its tax revenue. In these ways ecological modernization has played an important role the story of Germany and China's environmental states.

By comparing the process of eco-modernization in each state, it can be considered to have been more influential in the German case. For example, ecological modernization's longer history and theoretical roots in Germany point to the dominance of this body of thought as a motivation in Germany's environmental protection efforts. Adding to this is the more rigid nature of German policy making as it is strongly aligned and consistent with its basic principles, such as the precautionary principle.²⁶⁵ With this representation of ecological modernization engrained in German policy, ecological modernization has and will continue to carry significant weight in German environmental state considerations. In contrast, the effects of eco-modernization pointed to in this chapter were largely seen in more recent years; many developments were made in the late 90's and after the year 2000 while in Germany they go back to the 80's and in some cases the 70's.

At the same time, it is important to explain that while eco-modernization may have carried more intellectual weight in Germany, in both cases I would argue that strong eco-modernization has been pursued. For example, throughout this study we have seen how the economic systems, though not changed in their fundamental structures, have been reorganized to accommodate eco-modernization. The concept of the ecological civilization in China exemplifies these cultural and economic shifts while in Germany we have shown that German policy, with the precautionary principle as one of its guiding doctrines, has developed a relatively holistic approach to initiating processes of eco-modernization. Providing a manifestation of these shifts

²⁶⁵ Weale, p. 81

in the German case, the *Energiewende* described in Chapter 5, while resulting in part from a variety of international pressures, has been implemented in line with the tenants of ecological modernization and represents significant a significant transformation in the priorities and functions of economic and political structures.

From our analysis on civil society in Germany, the fact that these outcomes are indicative of strong eco-modernization can in part be attributed to the exclusive nature of the state. As we noted in Chapter 3, the passively exclusive attitude that the German government had towards the environmental movement resulted in the persistence of an oppositional force in society. The remanence of this force has been pointed to as a key factor in the outcome of strong rather than weak eco-modernization as the persistence of protest and social unrest maintained enough pressure to push for stronger eco-modernization measures.²⁶⁶ The latter, for example, can be found in the case of Norway which, in contrast the German case, showcases an actively inclusive policy structure which has largely coopted the environmental movement and eliminated the presence of any strong oppositional force.²⁶⁷ In Germany, therefore, we can see that through the specific context in which civil society operated, along with the influences of the legitimacy imperative and the international landscape, strong eco-modernization as described in this chapter has come as a result of the environmental state effects covered in the previous chapters. On top of this, it has, in its own right, helped to drive the country's environmental state development through its win-win approach that attaches an economic incentive to environmental management.

In the case of China, we have seen that the authoritarian regime of the state kept such an oppositional force from growing. As such, this factor was not as prominent as it was in the German case. Despite this, the fact that strong eco-modernization has been pursued by the

²⁶⁶ Hunold, pp. 86-88

²⁶⁷ Ibid. pp. 81-84

Chinese government can be attributed to the difference in the nature of political legitimacy in the state. The fragility of Chinese legitimacy, as described in Chapter 4, means that the legitimacy imperative in China carried more weight than it did in Germany in relation to environmental concerns. Therefore, while civil society itself was not strong enough to insert environmental concerns into core state goals, the incentive to maintain and build political legitimacy was powerful enough to help necessitate a response that ultimately culminated in the strong eco-modernization tactics that we have seen in this chapter. This makes sense, as these efforts would be economically opportunistic and would work to solve the major issues threatening social stability such as air pollution, thus providing a balance between two of the main components of the CCP's legitimacy, those being quality of life and economic growth. As such, the same fundamental results were seen, as environmental concerns became a key aspect of the government's attempt to control social unrest and maintain political authority.

Chapter 7: Conclusion

I. Understanding Processes of Environmental State Formation

Major Findings and Conclusions

Through this comparative analysis of Germany and China, processes of environmental state formation have been highlighted which are critical for future studies of the environmental state. By first comparing civil society as a factor, we have shown that civil society growth has been successfully hindered in China and therefore cannot be considered to have the same explanatory value as it can in the German case; in Germany, a vibrant and influential environmental movement has been allowed to grow as the state has not actively worked to hinder its advance. In this way, our analysis of civil society helped in framing the overarching questions of this study, which were:

- 3) Why have both China and Germany achieved environmental state status when one lacks a civil society capable of forming a unified and effective environmental movement?
- 4) More broadly, what factors allow for environmental state development in both democratic and authoritarian regimes?

At the same time, by giving an overview of the political opportunity structures in which civil society operated in each state, an underlying similarity was noted. Even though the German government was not actively exclusive in its attitude towards civil society it was, like China, exclusive in its policy making process. Because of this, the importance of state legitimization imperatives in this context was raised as a point of concern. Therefore, this chapter identified the first major finding of the study. While an influential environmental movement was only found in the German case, both states shared a trait that necessitated an exploration of state legitimacy.

By analyzing the nature of political legitimacy in Germany and China, we were then able to draw more significant conclusions in regards to each nation's environmental state growth. In Germany, where political legitimacy rests on the ability of democratic institutions to function as expected, the exclusive nature of the state helped to ignite enough opposition within civil society to call into question the ability of these institutions to meet public expectations. Ultimately, this resulted in the formation of the Green Party which, especially under its coalition government, was able to pressure other parties to take on environmental platforms, influence the policy process from the inside, and effectively tie environmental concerns with state legitimacy. In China, where legitimacy rests not on institutions but on the ability of the state to improve quality of life, the process was different but had essentially the same results. While civil society was not able to form a unified movement and influence the state, slowing economic growth and scattered but substantial social unrest resulting from high levels of pollution were enough to cause a greater crisis of legitimacy than was seen in Germany. This more vulnerable model of legitimacy was key in putting enough pressure on the Chinese government to take substantial action even without a fully developed civil society.

Turning to the international level, we showed how influences from beyond the borders of each state helped to aid and in some cases initiate environmental state development. Specifically, dependence on foreign energy sources and the agenda setting in the global environmental regime impacted both of our cases in ways that transcended their fundamental differences. Germany and China both had insufficient domestic energy supplies and as a result were subjected to forces that impacted their own efforts to maintain national security, a responsibility shared by democratic and authoritarian regimes alike. Likewise, both states shared the common goal of integration into the global community following periods of isolation due a variety of historical factors. Partaking

in the growing environmental regime was a strategy of their attempts at integration and the exposure to a variety of international linkages caused significant domestic changes, specifically in the direction of sustainable development. This aspect particularly is more significant in the German case, as the state is more directly affected by the influence of organizations like the EU.

In considering both of these factors and the ways in which they drove environmental state growth, similar outcomes began to appear. Because many of these outcomes were grounded in principles of sustainable development and focused on such advancements as industrial efficiency and technological adaptability, ecological modernization became a binding force between these two cases. An explanation for this (as touched upon in Chapter 1) is that ecological modernization is a useful tool for merging environmental concerns with legitimation and economic imperatives. John Barry and Robyn Eckersley, authors referenced in the literature review of this thesis, explain this by describing ecological modernization as a process that, "...serves the legitimation imperative of states, providing an ecological dimension to the modern state's crisis management function" and (quoting Christoff) is, "...‘a discursive strategy useful to governments seeking to manage ecological dissent and to relegitimize their social regulatory role.’"²⁶⁸ Ecological modernization then came as a primary result of legitimacy maintenance in each state, specifically in its strong form due to the strength of civil society in the German case and the higher risk of a legitimacy crisis in the Chinese case.

Therefore, political legitimacy and international influences both played a key role in kicking off environmental state formation and initiating processes of ecological modernization. Eco-modernization then helped to catalyze the environmental state growth process. This process can be visualized in Figure 7.1. While considering this process, it is important to remember that

²⁶⁸ Barry, 2005, p. 261

each of the theories should be considered individually at the same time as they are considered together as a unified model. This is because of the varying levels of influence that each factor had depending on the different state structures and regime characteristics present in each case. In fact, as we have just summarized, it is partly because of the fact that factors effected each state to different extents that similar outcomes were able to be produced (the legitimacy imperative being greater in China resulting in state action). At the same time, they should be considered together as they all overlap to form a model through which processes of environmental state creation can be analyzed.

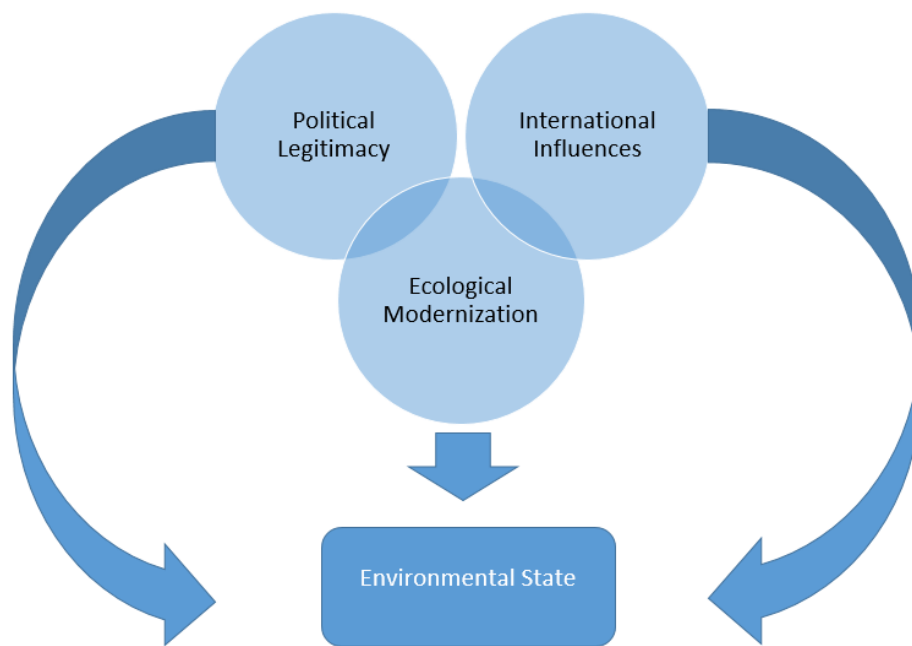


Figure 7.1: Process of Environmental State Formation

Shortcomings and Suggestions for Future Research

Additionally, it is important to note that through our focus on ecological modernization we mainly focus on technological adaptations to counter industrial pollutants and energy inefficiency and do not necessarily cover such issues as land management.²⁶⁹ This why it is

²⁶⁹ Duit, Andreas. "Introduction: The Comparative Study of Environmental Governance." *State and Environment: The*

important to consider the legitimacy and international factors not only in the way that they lead to ecological modernization but also in the ways that they contribute to the environmental state on their own, through such developments as nature preserves.

One of the shortcomings of this study however, was that a wide range of topics was covered in order to shed light on the larger process of environmental state creation. For future study, each of these topics can be further researched and expanded upon. For example, the relationship between MEA's and environmental state growth can be more systematically explored, along with other international linkages such as the effects of the EU on environmental state capacity. These more direct studies would be helpful as many of the environmental state results given in each chapter of this thesis had some level of overlap. For example, increased R&D funding was attributed to both energy independence initiatives and legitimacy maintenance in China. Additionally, because the concept of the environmental state is relatively new and unexplored, the literature surrounding these topics and comparative analysis in general has been quite sparse. As the environmental state undergoes more scrutiny and as the literature expands, more models and frameworks for comparing their development across a wide range of cases can be crafted.

Another shortcoming that could be addressed in future studies is the effectiveness of this type of environmental state growth. While from this perspective, we have seen why and how Germany and China have both been effective in building up their environmental state capacities, it was not within the scope of this study to consider whether or not these advancements have truly been successful in holistically managing their environmental issues. Much of our focus was on more blatant issues such as land management, air / water pollution and climate change. Put

Comparative Study of Environmental Governance. Cambridge: MIT, 2014. p. 10. Web.

simply, holistic environmental management is much more nuanced than this. This is especially important to keep in mind as our analysis pointed to ecological modernization as a main theme and catalyst of environmental state growth.

Skeptics of ecological modernization see it as essentially a coping strategy by governments intended on creating better but not necessarily adequate environmental management initiatives.²⁷⁰ These critics argue that ecological modernization simply perpetuates the industrial and consumer practices that have caused the world's most pressing environmental issues. For example, many point to Jevons paradox which states that as resource and energy efficiency increase humans will simply increase their usage.²⁷¹ With this critique in mind, it is important to remember that in this thesis processes of environmental state creation evident in Germany and China were explained but not justified. There have been no conclusions made as to whether or not the outcomes seen in both states have been entirely satisfactory or whether or not these represent the ideal environmental state.

II. Implications for Other States

The analysis conducted in this thesis has worked to show that fundamentally different states can still achieve environmental state status. In the absence of a unified environmental movement, states with authoritarian regimes that offer no or very little path for public participation can see the same results of environmental state growth as seen in those with democratic regimes due to the influence of political legitimacy, the international landscape, and resultant processes of ecological modernization. From this central conclusion, the potential for other unlikely states to evolve into environmental states can be better analyzed. The concept of

²⁷⁰ Barry, 2005, pp. 260-261

²⁷¹ Bonds, Eric, and Liam Downey. "Green Technology and Ecologically Unequal Exchange: The Environmental and Social Consequences of Ecological Modernization in the World-System." *Journal of World-Systems Research*, vol. 18, no. 2, 2012, p. 170, doi:10.5195/jwsr.2012.482.

an environmental state is typically applied to developed, Western democracies; our understanding must be expanded. This is critical moving forward as states in the Global South, with a diverse range of historical and political backgrounds, become ever more important actors in fighting international environmental issues.

As such, the findings of this study are not only important for understanding the stories of Germany and China but of states around the world. Using climate change as an example, as the effects of this process worsen states around the world will feel the impact regardless of their unique characteristics. States in the Global South will especially face the worst of climate change's effects as they are geographically located in areas that are most susceptible to these problems. States in Central and South America for instance, are at much greater risk of flooding, tropical storm damage, and drought than are other regions.²⁷² Adding to this is the fact that they lack the financial resources, technology, knowledge and administrative capacities to respond.²⁷³ By identifying and explaining similarities between China (a developing state) and Germany (a highly developed state) lessons can be taken and applied to other cases that may not be the most obvious candidates for future environmental state status.

For example, as noted in Chapter 2's literature review, environmental state characteristics do not always correlate with factors usually used for comparison like governmental structure (Ex: majoritarian vs. consensual democracy).²⁷⁴ In attempting to answer the questions of this thesis, as explained in the previous section of this chapter, the factors considered for analysis showed that democratic states with active environmental movements and authoritarian states

²⁷² Magrin, G.O., J.A. Marengo, J.-P. Boulanger, M.S. Buckeridge, E. Castellanos, G. Poveda, F.R. Scarano, and S. Vicuña, 2014: Central and South America. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1499-1566.

²⁷³ Ibid.

²⁷⁴ Duit, p. 87

with no environmental movement can undergo similar developmental paths. For example, eco-modernization's use as a tool in legitimacy maintenance and its dominance as a form of discourse in the international regime give it a great deal of value in addressing environmental state formation across a range of contexts. Therefore, as was done in this thesis, ecological modernization can be looked to as both an outcome and a causal factor in studying the rise of other environmental states regardless of differences in regime type, civil society formation and economic structure.

By better understanding how states have and are rising to meet the problems of a changing environment, we can better predict what states will do and better explain what states should do in the future. This is not only important from the perspective of environmental studies but also from the perspective of political science in general. As we understand more about the environmental state, we understand how our definitions and conceptions of the state as a political unit are lacking. By showing that states as different as Germany and China have been able to achieve environmental state status, we can explain how and why states are adapting in their core functions to better accommodate environmental concerns regardless of regime type, level of economic development or level of societal development; this then gets the bigger question of what a state is and what it ought to be.

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