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Changing the (political) climate? Assessing the influence of Germany and the European Union on climate governance in Israel

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Abstract

In recent years, Israel has started to change its response to the global climate crisis. Actors from different sectors and governance levels are pursuing climate policies and climate initiatives more than ever before. These changes are occurring despite the slow reaction to the crisis at the central level, which dominates the decision-making processes, and even though these concerns have yet to reach the public agenda. At the same time, two of Israel's closest partners – the European Union (EU) and Germany – are striving to lead global climate initiatives. Against this background, this dissertation examines the link between operations being conducted by Germany and the EU regarding the climate crisis and changes occurring in climate governance in Israel.

This link is analyzed through three types of interactions: How German federal and municipal actors, secondly, German non-state actors and, lastly, the EU interact with Israeli state actors and Israeli civil society. These interactions are examined with recourse to four analytical concepts: soft power, policy transfer, orchestration, and polycentric governance. These concepts sharpen our understanding of the ways interactions are conducted, the factors shaping them, how these operations concretely effect changes in climate governance in Israel, and, lastly, which obstacles these interactions are facing, from the initiation to the realization of their efforts. Applying a qualitative approach, the analysis draws on 68 interviews with stakeholders from Germany, Israel, and the EU, and on supporting textual sources.

The findings show that indirect, but coordinated interactions provide the following elements regarding efforts to address the climate crisis in the Israeli context: expert knowledge, innovative approaches and thinking, and access to an expanded network of actors that are themselves involved in these efforts within the country. These efforts lead to the creation of "climate coalitions" across governance levels in Israel. However, bilateral (direct) kinds of interactions appear to reach smaller groups of actors in Israel and impact in limited ways on authority, innovation, and participation. The changes attributed to Israel's interactions with the EU and Germany present within the centralized political system in Israel elements of polycentric systems that address climate concerns there. However, in this form, interactions are difficult to scale and widen to affect larger target groups in Israel, for example, where such interactions are met by groups of stakeholders beyond existing coalitions, or where these are not successful in questioning dominant policy paradigms.

This dissertation aims thus to help in closing gaps in the research regarding mechanisms of influence at work on multiple scales and with multiple actors simultaneously within a single governance system; regarding the work and roles of the EU and Germany in promoting climate policy beyond their borders; and regarding the evolving responses to the climate crisis in governance systems in Israel.

Abstrakt

Die Haltung Israels zur globalen Klimakrise hat sich in den vergangenen Jahren grundlegend gewandelt. Stärker als je zuvor engagieren sich Akteure aus unterschiedlichen gesellschaftlichen Bereichen und Regierungsebenen für eine nachhaltige Klimapolitik oder schließen sich Klimainitiativen an – anders als die Zentralregierung, die politische Entscheidungsprozesse zwar maßgeblich beherrscht, bislang aber träge auf die Krise reagiert, und obwohl das Thema bislang gesellschaftlich und politisch nicht auf der Tagesordnung steht. Gleichzeitig treten zwei der engsten Verbündeten Israels – die Europäische Union (EU) und die Bundesrepublik Deutschland – als Vorreiter im globalen Klimaschutz auf. Vor diesem Hintergrund untersucht die vorliegende Dissertation den Konnex zwischen den von der EU und Deutschland verfolgten Klimaschutzmaßnahmen und dem umweltpolitischen Umdenken, das in Israel zu beobachten ist.

Zu diesem Zweck nimmt das Vorhaben drei Ebenen in den Blick und zeichnet nach, wie erstens deutsche Akteure auf Bundes- und kommunaler Ebene, zweitens deutsche Nichtregierungsorganisationen und drittens die EU mit dem israelischen Staat und israelischen Nichtregierungsorganisationen sowie mit der israelischen Zivilgesellschaft interagieren. Diese Interaktionen werden unter Rückgriff auf vier analytische Begriffe beleuchtet: Soft Power, Politiktransfer (policy transfer), Koordination (orchestration) und polyzentrisches Regieren (polycentric governance). Diese Begriffe schärfen das Verständnis dafür, wie Interaktionen umgesetzt werden, welche Faktoren diese Umsetzung prägen, wie diese Operationen sich auf die konkrete Klimaschutzpolitik in Israel auswirken, und welche Hürden diese Interaktionen von der Initiierung bis zur Umsetzung erschweren. Eine Grundlage für die Untersuchung bildet eine qualitative Erhebung, für die 68 Interviews mit Gesprächspartner:innen aus Deutschland, Israel und der EU geführt wurden. Ergänzt wird die Auswertung durch den Einbezug von Textquellen.

Die Forschungsergebnisse zeigen, dass indirekte, aber koordinierte Interaktionen liefern die folgenden Elemente im Hinblick auf den Umgang mit der Klimakrise vor Ort stärken: Fachwissen, innovative Ansätze und Haltungen, und der Zugang zu einem erweiterten Netzwerk von Akteuren, die sich an Klimaschutzbemühungen in Israel beteiligen. Diese Bemühungen begünstigen wiederum die Bildung von „Klimakoalitionen“ über verschiedene Regierungsebenen hinweg, die zur Lösung der Klimakrise aktiv werden wollen. Bilaterale (direkte) Interaktionen scheinen dagegen nur kleinere Gruppen von Akteuren in Israel zu erreichen und haben nur begrenzt Einfluss auf bestehende Autoritäts-, Innovations- und Partizipationsstrukturen. Die aus den Interaktionen Israels mit der EU und Deutschland resultierenden Veränderungen sind somit innerhalb des zentralisierten politischen Systems als Elemente polyzentrischer Systeme zu verstehen, die sich mit Klimafragen in Israel befassen. In dieser Form erweist es sich deshalb als schwierig, diese Interaktionen zu skalieren und

auf breitere Zielgruppen in Israel auszuweiten, zum Beispiel sobald sie auf Gruppen von Interessenvertreter:innen außerhalb bestehender Koalitionen treffen, oder dort, wo es trotz Interaktion nicht gelingt, etablierte Verfahrensweisen und dominante politische Paradigmen in Frage zu stellen.

Die Dissertation will somit helfen, mehrere Forschungslücken zu schließen, und zwar in Bezug auf Mechanismen der Einflussnahme, die auf mehreren Ebenen und mit mehreren Akteuren gleichzeitig in einem einzigen Governance-System am Werke sind; in Bezug auf die Rollen und die Arbeit der EU und Deutschlands bei der Förderung von Klimaschutzmaßnahmen jenseits ihrer Grenzen; und in Bezug auf den sich entwickelnden Umgang mit der Klimakrise in den Governance-Systemen Israels.

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Table of Contents

List of main abbreviations

AHK	German Chamber of Commerce
BEA	Berliner Energieagentur GmbH (Berlin Energy Agency)
BEE	German Renewable Energy Federation
BMDV	Federal Ministry for Digital and Transport (Germany)
BMUV	Federal Ministry for the Environment, Nature Conservation, Nuclear Energy and Consumer Protection (Germany)
BMWK	Federal Ministry for Economic Affairs and Climate Action (Germany)
CDU	Christian Democratic Union
CEO	Chief Executive Officer
CSU	Christian Social Union
DGNB	German Green Building Council
ENGO	Environmental Non-Governmental Organization
ENP	European Neighborhood Policy
EU	The European Union
FES	Friedrich Ebert Stiftung
FFL	Freiburg Future Lab
GDR	German Democratic Republic
GIZ	German Society for International Cooperation (Germany)
HBS	Heinrich Böll Stiftung
HSC	Heschel Sustainability Center
ILGBC	Israeli Green Building Council
INSS	Institute of National Security Studies
IPCC	Intergovernmental Panel on Climate Change
IPPI	Israel Public Policy Institute
IR	International Relations
ISRAD	Israel Research And Development
KAS	Konrad Adenauer Stiftung
MAKI	Israel Land Authority
MLG	Multi-level Governance
MoEP	Ministry of Environmental Protection (Israel)

MoU	Memorandum of Understanding
NGO	Non-Governmental Organization
NPE	Normative Power Europe
NPO	Non-Profit Organization
NSA	Non-State-Actors
OECD	The Organization for Economic Co-operation and Development
PV	Photovoltaic
RLS	Rosa Luxemburg Stiftung
SDGs	Sustainable Development Goals
SDW	Stiftung Deutschland Wirtschaft
SME	Small and Medium Enterprise
TAN	Transnational Advocacy Networks
UAE	United Arab Emirates
UFZ	Helmholtz-Zentrum für Umweltforschung
UK	United Kingdom
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIDO	United Nations Industrial Development Organization
US	United States (of America)
WWI/II	World War I / II

List of tables and figures

Chapter 1: Introduction

The end of the 2010s saw a tremendous change in the way Israel[1] advances solutions to tackle the climate crisis. Actors that were previously indifferent to climate impacts suddenly made loud and clear that something needs to be done. Calls for more renewable energy and phase out of coal and oil appeared in the mainstream media, and more civil society actors and private corporations started to address climate concerns.[2] From a situation of little interest being shown by the general public and central government in the 2000s, Israel has grown into a country that has set climate goals and increased the share of renewable energies in its energy mix, adopted policies to electrify its mobility system and adopted national green building regulations (Tal, 2021). This is a turn of events even if it occurred later than many other developed economies.

Why, then, did Israel boost its climate response in recent years, despite several conditions that may not favor a response to the climate crisis? These conditions are: 1) the strong control of the central level which, until very recently, has been late to adopt climate policies despite its international commitments (Tal, 2016b, 2020b), 2) the lack of knowledge and experience concerning the need to act on and the tools to tackle the crisis (Ruggill, 2018; Tal, 2016b), and 3) the fact that environmental and climate change problems are, in general, 'non-issue' in the eyes of Israeli public and decision makers (Tal, 2016a, 2016b, 2021; Wolfson, 2020b). Given this political environment, it is intriguing to examine why climate concerns are nevertheless advancing.

There are many potential explanations for these developments. As in many other countries, Israel's climate policies and the actions actors have taken to address the climate crisis were born out of many things, some originated endogenously while others were the result of factors from outside of the country. This study aims to address some of the processes and mechanisms that led to some of the policies and practices to tackle the climate crisis in Israel that we are witnessing today. The study focuses on exogenous sources of influence on Israeli actors, and the translation of this influence into Israeli climate governance arrangements. In particular, the study examines the roles and contributions the European Union (EU) and German actors have had in shaping climate governance in Israel through different types of interactions with Israeli actors.

This chapter sets the scene by firstly explaining the broader context regarding climate actions (section 1.1). The chapter then provides useful highlights concerning the relationships that are at the center of this research: the relationships between Germany, the EU and Israel and their implications

[1] In this study, Israel / the State of Israel excludes the occupied territories of the Palestinian territory.

[2] "Climate concerns" in the context of this study are needs and demands that come up when dealing with the climate crisis. These concerns may vary depending on the identity of the actor.

on the Israeli climate governance (section 1.2). The subsequent section elaborates on the research questions that guide this study and draws a general outline of what is being studied and how (section 1.3). The chapter ends with a short description of the structure of the thesis (section 1.4).

1.1. The broader contexts

Developments in Israeli climate governance and their relations to exogenous forms of influence are not occurring in an empty space. The 2010s saw several, integrated factors that pushed forward calls from all over the globe and from different sectors to tackle the climate crisis. On the one hand, at the 2015 United Nations Climate Change Conference (UNFCCC) in Paris (COP 21), the world's biggest greenhouse gas (GHG) emitters, China, and the US, took on obligations to reduce their emissions substantially. On the other hand, bottom-up initiatives such as the Fridays for Future movement that was inspired by the young activist Greta Thunberg have swept large crowds into action in many countries. It is clear now more than ever before that as a global phenomenon, climate change is one of the greatest challenges facing global society in the 21st century. The crisis will have political, social and economic implications worldwide (Dimitrov, 2010). The climate crisis simultaneously shapes and is being shaped by parallel phenomena such as rapid urbanization, increased consumption of resources and carbon-intensive production processes (UNEP, 2018). Recent reports in 2021 and 2022 from the sixth Intergovernmental Panel on Climate Change (IPCC) have stressed the urgency of taking fast global action. According to the reports, the climate is changing faster than was previously estimated by the scientific community, and drastic measures to reduce GHG emissions and shift human populations toward sustainable patterns of consumption and production are urgently needed (IPCC, 2022).

There is growing understanding in the international community that in order to address this global challenge, an integrated, multi-sectorial approach is needed (Jordan, Huitema, van Asselt, & Forster, 2018). This was also stressed explicitly in COP21 in Paris (Hale, 2016; Kuyper et al., 2018). These developments brought about global and local leaders in climate actions: (nation) states, cities and even the supranational level (Bulkeley, 2010; Schreurs, 2008). These leading actors pushed for climate solutions and the decarbonization of economic systems at both global and domestic levels. At the same time, there has been an increase in the range of relationships and interactions among different types of actors at the global, national and local levels to address the crisis (Kuyper et al., 2018). These engagements stem from the notion that the climate crisis is a global phenomenon that requires – and therefore provides incentives to – certain forms of interactions.

More than ever before, foreign stakeholders are assisting, developing, implementing and supporting climate and sustainability initiatives at national and subnational levels in jurisdictions other

than their own (Jordan, Huitema, van Asselt, et al., 2018). Different types of stakeholders and the inter-connectedness between them are part of these efforts (Newell et al., 2012). The patterns of multi-actor systems at various governance levels and different types of interactions have in them power relations, changes in political capabilities and positions, as well as knowledge and ideologies all mixed together (Newell et al., 2012). The responses to the climate crisis that are encouraged throughout these types of interactions are in the power and authority of subnational and sometimes non-state actors, and not only at the hands of the central level.

The interactions that emerge between different types of actors to address the climate crisis entail ideas, norms, and values as to how to address the crisis. The *ideational* components diffuse and move across boundaries and governance levels (Jörgens, 2004; Torney, 2019), not only in regard to the climate crisis but, for example, to other environmental concerns and human rights infringements (Keck & Sikkink, 1999; Stone, 2012). These ideas can be influential domestically even without any regulatory or procedural moves by the central government (Jörgens, 2004).

Many studies highlight the role of local actors and bottom-up action as a positive or desired force for reaching GHG emissions reductions as part of overall global efforts to address the climate crisis (Betsill & Bulkeley, 2006; Bulkeley, 2010; Kern, 2019; van der Heijden, 2019). Other studies tend to highlight the role and potential of transnational networks and global governance mechanisms to advance change (Andonova et al., 2009; Bulkeley et al., 2012; Dellas et al., 2011; Hale & Roger, 2014). What is less understood and highlighted is the influence on domestic climate action by external forces, in settings that are not neatly situated as global or local mechanisms but are somewhere in between. While the Israeli case has its own unique characteristics, it can serve as an example of interactions that aim to address responses to the climate crisis and are occurring between external actors and domestic actors.

1.2. External influence and domestic action: The EU and Germany as senders, Israel as a receiver

The broader context that was laid out in the previous section provided that local (domestic) climate action can be initiated and assisted by exogenous actors. This section elaborates on the roles of the EU and Germany as exogenous influencers ("senders") and Israel as the receiver of that influence.

1.2.1 Climate diplomacy in the EU and Germany

Germany and the EU are making substantial efforts to find ways to decarbonize their economies. In Germany this is occurring under the rubric of the *Energiewende* (energy transition). The EU is on a path of decarbonization and aims to be climate neutral by 2050. It has passed dozens of directives and

regulations related to reducing emissions from transportation and increasing the use of renewable energies, and the efficient use of resources. Recently this process was boosted by the European Green Deal, the union's roadmap to realizing a more sustainable and climate neutral European economy (European Commission, 2019; Schreurs, 2020).

These transformations are intertwined with German and European foreign policies. Unlike superpowers such as the US, China and Russia, the EU and Germany draw on their economies, trade, cultures and other *soft* mechanisms as their main source of power and influence in the global arena (CPD, 2018; Lanshina, 2015; Michalski, 2005; Tocci, 2008b). (Importantly, chapters 2, 4 and 8 acknowledge and briefly discuss the soft power approach of Germany and the EU amid recent geopolitical developments that evolved after the Russian war on Ukraine.) Sustainability and, recently, climate change are among the top issue areas that the EU and Germany pursue in their foreign policies. Both Germany and the EU are making significant efforts to promote and implement sustainability and climate initiatives elsewhere in the globe, and to implement their knowledge, experience and sometime technology in foreign jurisdictions (Adelle et al., 2018; Harris, 2007; Li, 2016; Oberthür & Pallemaerts, 2010; Steinbacher & Röhrkasten, 2019). These actions by the EU and Germany serve at the same time as a goal (reducing global GHG emissions) and a mean (using the climate crisis) to promote their interests. These initiatives are framed under the term "climate diplomacy" (Carius et al., 2017; Li, 2016; Oberthür & Pallemaerts, 2010); a term used in various forms also by emerging global forces such as China and India (Karakir, 2018).

One geographical area in which the EU invests soft mechanisms of influence is in neighboring countries in its southern and eastern borders – known as the European Neighborhood Policy (ENP) (Chaban et al., 2019; Gänzle, 2007). Israel is one of these countries. Dating to the early 2000s, the ENP is a strategy to turn EU's neighbors into allies, or at least to make them stable enough not to destabilize the union. Through cooperation, the neighboring countries are supposed to adopt, or at least get closer to, the union's liberal values by adapting to EU regulations, policies, and standards. It was found that in ENP countries which, typically, have lower environmental standards, awareness, and capacities than the EU, the latter is institutionalizing environmental governance through working with local ENGOs (Buzogány, 2018). The EU encourages local adoption of its environmental norms as well (ibid).

Germany works in a similar way to that of the EU. Experience and progress in areas such as renewable energy and green building contributed to Germany's efforts to become a global advocate of GHG emissions reductions (Quitzow et al., 2016; Quitzow & Thielges, 2022; Schreurs, 2020). While Germany's position as a frontrunner in the green building and sustainable transportation sectors has decreased compared to other European countries, in recent years it has been making efforts to boost the decarbonization of its economy. For example, the 2021 Climate Law gradually increases the price

of a metric ton carbon emissions, reaffirms plans for the phasing out nuclear energy and calls for the phasing out of the use of coal (for energy and heat production) by 2030 (Schreurs, 2020). The energy crisis that Germany and the rest of the world have been experiencing since the Russian invasion to Ukraine in early 2022 forced the German federal government to postpone the phase out the use of coal. However, the country maintains ambitions plans to decarbonize the economy such as increasing the share of renewable energy in the energy mix and increase energy efficiency measures (Appunn & Wettengel, 2022).

These markers put Germany in a leading global position concerning the climate crisis (Steinbacher & Röhrkasten, 2019). Germany applies soft mechanisms to pursue its interests, as ideas and hands-on experience from the German energy transition are spreading to other European and non-European countries (GIZ, 2018; Morris & Pehnt, 2016; Schreurs & Tiberghien, 2010). Research on the mechanisms and outcomes of the German efforts to transfer its knowhow concerning renewable energy and climate policies elsewhere is increasingly growing (Li, 2016; Steinbacher, 2019; Steinbacher & Röhrkasten, 2019).

This dissertation aims to add to the emerging research on the influence of Germany and the EU's climate policies and climate actions in other jurisdictions along two main points: deepening the analysis into the drivers and mechanisms of climate diplomacy in domestic/local settings (unlike global or regional settings), and the outcomes of these mechanisms in terms of local climate governance developments. Second, the dissertation provides insights to the work of *both* the EU and Germany in and with several types of governance levels and several types of actors in a third country's political setting -- Israel.

1.2.2. Israel: late adopter and importer of policy

Located in the Middle East, one of the regions that will be affected the most by climate change (Freimuth et al., 2007; Zittis et al., 2022), Israel will be highly affected by climate change (Price, 2020; Tal, 2020b). While Israel was a global pioneer in tackling water shortage, addressing desertification and developing intensive agriculture in arid areas (Tal, 2007, 2016a), the country did not present pioneer spirit in promoting sustainable energy and addressing climate change (Tal, 2020b). In many areas that are related to climate change, Israel is a late adopter of policies. (See more background details concerning Israel in chapter 4.)

Israel is highly dependent on global powers to sustain itself. More than 60% of its goods are exported to the United States of America (US) and the European Union (EU), and the Israeli military and other security agencies enjoy strong and continuous support from the US establishment.

Additionally, the country enjoys almost automatic support from the US and Germany in international forums (Mahler, 2004; Pallade, 2005).

Recent years show certain changes in the country's international position and, as a result, a change in the maps of influence it is subjected to. The accession of Israel to the OECD in 2010 required Israel to adapt to the environmental standards of the organization. This process demanded, in turn, adopting large amounts of international knowledge and governance norms that were less well known among Israeli officials beforehand (Michaels & Tal, 2015). While Israel has ambiguous, and sometimes even hostile, relations with the United Nations (UN) (Mahler, 2004; Tal, 2020a) and the EU (Chaban et al., 2019; Harpaz, 2015), it also managed to form allies with individual European nations such as Germany and, recently, Hungary and Poland. Israel also managed to draw alliances with emerging superpowers such as China and India.

In terms of policy, the US, Germany and the EU are Israel's main sources of influence (Mahler, 2004). For example, Israeli public officials carefully adjust European finance policies to their own needs when they formulate policies in their domestic (Israeli) domain (Magen, 2012). Not only that but these sources of influence have also impact in terms of norms and values that Israel adopts or adjusts itself to (du Plessix, 2011; Lazarou et al., 2013).

Foreign political influence is not limited to foreign states and international organizations, but also to subnational initiatives (Cooper & Herman, 2020; Louvet, 2016) and non-state actors (Abelmann & Konarek, 2018). This means that there are several channels of influence on Israeli actors, which are expressed in different and distinct sets of interactions, actors, and interests. These (foreign) actors have an interest in influencing not only policies but also the larger political landscape.

As Israel is clearly a late adopter of climate policy and other aspects of sustainability, Israeli governmental, subnational, and non-state actors seek information, knowledge, and experience from exogenous sources to address climate and sustainability-related problems. There can be hardly any doubt that Israel has been influenced by global trends and subject to international pressure to align its environmental and climate actions to global expectations and trends regarding GHG emissions reduction (Eitan, 2021; Ruggill, 2018; Specktor et al., 2009; Vogel, 1998). This environmental policy alignment can be seen as part of a larger, global transformation: international stimulations influence domestic actors through, for example, diffusion processes across countries and harmonization of policies at the international level (i.e., when many countries adopt similar policies) (Busch and Jörgens 2003; cited in Jörgens, 2004, p. 249).

Previous studies have identified and addressed the need of Israeli decision makers to learn and absorb solutions and operational measures to environmental problems from abroad. For example, there has been learning from models and successful cases regarding sustainable forms of

agricultural practices (Amdur, 2009) and sustainable waste management (Ayalon et al., 1999), as well as diffusion of ideas concerning waste management from Germany to the EU and then to Israel (Ostrovsky, 2017). Others examined the adoption of market-based economic instruments in Israel to address environmental problems following the accession to the OECD (Lavee and Joseph-Ezra 2015), as well as diffusion mechanisms that take place by (mainly) non-state and non-political Israeli actors in adopting favorable EU policies, including environmental regulations (Magen, 2012).

More directly concerning the climate crisis, Israel's 2010 Packaging Law, 2008 Clean Act Law and climate mitigation policies appear to be the result of a mixture of emulation and learning-based evidence from other developed nations such as the US, the Netherlands and Germany (Nachmany, 2016). According to Nachmany (2016), Israeli decision makers engaged in these efforts to gain legitimacy in the eyes of other Israeli actors rather than from the global community. Israel's climate regulations and central government decisions were partly a reaction to international peer-pressure to join global climate action. Especially, the built-in flexibility in the 2015 Paris Agreement that enabled countries to tailor climate actions according to their capabilities (unlike the more strict mechanisms such as the Kyoto Protocol) enabled the Israeli government to ratify more easily the agreement (Ruggill, 2018). Parliamentary discussions underpin international agreements and global climate discourses that address GHG emissions reduction and aim to raise awareness to climate change as "significantly increase Israel's commitment to climate change mitigation through renewable energy promotion, while also influencing the domestic discourse in this direction" (Eitan, 2021, p. 10).

At the local level, city-to-city cooperation between Israeli and German cities inspired action and emulation, but learning is restricted to a small share of actors and concrete outcomes from cooperation have been moderate (Shefer, 2019). At the civil society sector, Israelis with Anglo-Saxon origins influenced the Israeli environmental movement by introducing actions drawn out of Anglo-American environmental movements, for example using the judicial system to confront governmental decisions (Greenspan, 2015). However, in recent years Israeli ENGOs shifted their point of reference concerning environmental (and recently, climate problems) from the US to European countries (Nachmany, 2016). In addition, others have started to examine the work of think tanks and other non-state actors from Germany (e.g., the Heinrich Böll Stiftung) in supporting Israeli actors and transferring knowledge and experience regarding environmental and, recently, climate concerns (Müller, 2018; Shefer, 2018).

What emerges from many of these studies is 1) the key role exogenous knowledge plays in Israeli environmental contexts, 2) the roles the EU and Germany play as knowledge providers, and 3) the need to know more about ideas and values, as well as mechanisms related to these roles. This dissertation adds to these discussions.

1.3. Developing a research question

The previous section that elaborated on the influence of exogenous forces over Israel point to the possibility that foreign actors have influenced Israeli actors' approaches and responses to the climate crisis. However, research so far provides insufficient understanding of international influence of this type. Given the strong influence of the EU and Germany on Israel as providing models of 'good policy' *and* the eagerness of these two foreign entities to lead on climate action globally, this study examines the assumption that Germany and the EU are exercising strong influence on the responses and approaches of Israeli actors to this crisis. To date, this assumption has not been thoroughly addressed in research. We do not know enough about the mechanisms and the outcomes that this possibility (potentially) provides in terms of governance developments in Israel.

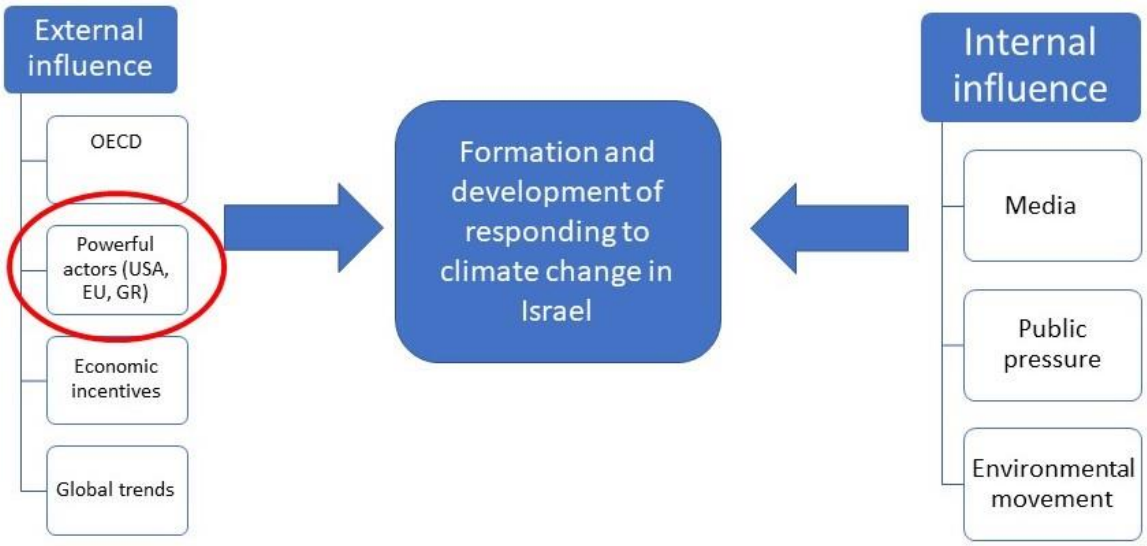
Exogenous influence is an integral part of decision making processes and 'independent' decision making in domestic jurisdictions alone hardly exists (Peck, 2011). This study focuses on exogenous influence in the Israeli climate governance system (Figure 1). The author acknowledges the possibility and likelihood of global, large scale diffusion processes on the development of climate initiatives in Israel and their relations to governance arrangements. There is no doubt that, as a late adopter of policy, Israel is influenced by global trends and innovations. Israeli policy makers are, no doubt, actively participating in global conversations over the climate crisis. What this study aims for is to focus on one aspect of this global process. The study's goal is to show how an aspect of this dissemination of foreign knowledge to Israel concerning the climate crisis is driven by agendas of powerful actors, which intentionally try to fuel and steer responses to the climate crisis in a domestic jurisdiction. This situation, therefore, is not (politically) neutral. Moreover, this situation yields outcomes that are translated into changes in Israeli climate governance. More concretely, the study analyzes the works of external forces – the EU and Germany – and how they have made an important contribution to the development and maintenance of changes in the Israeli system, albeit not being the sole contribution. In other words, this study aims to show how certain actions by the EU and Germany have amplified, centered, and rooted the climate-issue in the Israeli realm, through several political channels, making changes in the Israeli climate governance in its early, and crucial, stages of formation. This assumption is translated into a research question:

In Israel, a country with a centralized political system that has reacted slowly to the climate crisis, how do foreign actors such as Germany and the EU influence (domestic) climate governance? And why does influence occur in certain forms and not others?

These questions embed within them further sub-questions, which are linked to the analytical frameworks that guide the analysis (see Chapter 2). The four sub-questions are:

1. **How** do mechanisms of exogenous influence work?
2. **What** drives and motivates exogenous influence?
3. **How** is exogenous influence expressed in terms of changes across governance levels?
4. **What** are the obstacles that exogenous influence is faced with?

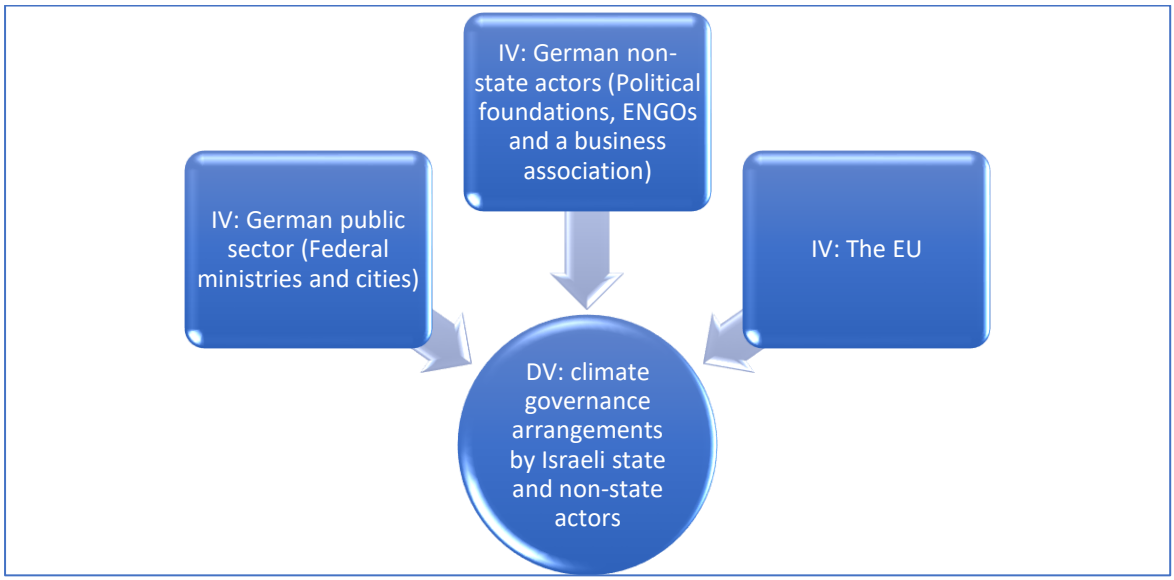
Figure 1: Potential factors that influence domestic climate governance (Figure by the author)



While this study does not aim to establish direct causal relations between dependent and independent variables in the context of the interactions between the EU, German actors and Israeli actors, the following definition can assist in clarifying the relations that this study strives to understand. Israeli domestic climate governance can be regarded as the *dependent variable* (DV) of this study. "Domestic governance" is defined as the system in which the bundle of actors from different governance levels in Israel are operating to pursue their interests and their goals as to advance policies and other actions to address climate change. In other words, domestic governance is concerned with the individual political actors at different levels (central, local, and non-state actors) that take part in climate responses in the Israeli political system. The independent variables (IVs) can be defined as three exogenous factors that influence the Israeli domestic climate governance. The IVs are: German public sector actors, German non-state actors, and the EU. Without the presence and influence of these IVs, the DV (climate governance) would have likely been different. This does not necessarily reject the presence and influence of other IVs. Figure 2 elaborates on these relations. (See Chapter 3 for detailed explanations on the selection of the actors depicted in this Figure.)

Figure 2: A depiction of the dependent and independent variables of this study

(Figure by the author)



To answer the research question that was noted previously, this study applies four analytical concepts (see Chapter 2). These concepts contribute to understanding the different parts of German and EU influence on changes in Israel's climate governance system. *Policy transfer* (Dolowitz & Marsh, 2000) and *Orchestration* (Abbott et al., 2012) theories are integrated in order to understand the mechanisms of influence of German actors and the EU (answering research question 1). *Soft power* (Nye, 1990, 2004) is applied to understand the origins and drivers of exogenous influence (answering research question 2). *Polycentric climate governance* (Jordan, Huitema, van Asselt, et al., 2018; Ostrom, 2010) is the analytical lens that enables a reflection on the outcomes of the exogenous influence (answering research question 3). Lastly, based on elements from these analytical concepts, this study tracks barriers and problems for the exogenous influence (answering research question 4). Together, the four analytical concepts enable a thorough examination of the different ways German actors and the EU influence the responses and approaches taken to tackle the climate crisis by several types of Israeli actors. As mentioned before, the study does not claim that Germany and the EU are the *sole* external influencing powers over climate governance in Israel. Rather, the study illustrates the pathways and powerplays by which the EU and Germany exercise influence in Israel, and the role this influence has in shaping Israel's current direction in tackling the climate crisis.

The study adopts a qualitative approach to understand these interactions and their impacts in Israel. A qualitative analysis can lead to a thorough understanding of relations between actors, identifying underlying powerplays and mechanisms, and revealing nuances that are important to understand governance systems in different ways than quantitative analyses. The qualitative analysis

integrates 68 semi-structured interviews with Israeli, German and European experts, officials and other professionals, and reviews and analyses publications of state and non-state actors that are relevant to the goals of the study. The qualitative analysis also draws from the author's personal experience from professional meetings and interactions between German and Israeli actors that addressed energy, climate change.

1.4. Structure of the dissertation

The dissertation is structured as follows. Chapter 2 develops the analytical concepts introduced above. Chapter 3 elaborates on the methodology of this study. This study is a qualitative analysis of a single case study with three units of analysis. This chapter provides details on how and why the qualitative approach was used, as well as elaborates on the design and operation of this study. Chapter 4 provides background that is helpful to better understand the context of the Israeli system and the external forces that try to exercise influence over it. Chapters 5 to 7 are three distinct empirical chapters that examine, following the analytical concepts provided in chapter 2, three types of interactions: Chapter 5 examines the interactions between German Federal ministries and German cities and Israeli actors, Chapter 6 examines the interactions between German non-state actors and Israeli actors, and Chapter 7 examines interactions between the EU and Israeli actors. Chapter 8 discusses the findings from the empirical chapters and provides concluding remarks out of the analysis.

Chapter 2: Analytical concepts

Chapter 1 introduced gaps in research concerning Israel's climate responses. There is a lack of understanding of how it happened that Israel upgraded its climate policies and initiatives at various governance levels, despite a seemingly unfavorable political setting. I hypothesized that foreign actors (especially the European Union [EU] and Germany) contributed substantially to this development. On this basis a research question was specified: How have the European Union and Germany contributed to changes in climate governance in Israel, and what explains the shape of their influence?

This chapter presents analytical concepts that together form the conceptual framework for addressing this question. Each section of this chapter presents a separate analytical concept, describes its application and relevance to the study, and identifies relevant key gaps. The concepts include polycentric climate governance, policy transfer, orchestration, and soft power. They are all considered as equally important for the analytical process. The last section presents a synthesis of these concepts and develops a comprehensive conceptual framework.

2.1. Polycentric climate governance

The following section elaborates the characteristics of polycentric (climate) governance, its propositions, how actors and scales are addressed through this concept and the power relations found in polycentric systems. The section ends with a summary of key research gaps that are addressed in this study.

2.1.1. Characteristics

Governance refers to sets of relationships and interactions between organizations and actors in a political setting, and how these are used to address shared problems or challenges. Governance systems include governmental and non-governmental actors, civil society, and private entities. The actors interact according to formal and informal rules, norms, and values. Actors are tied in a web of (policy and political) networks, they are not independent of each other, and they have various degrees of autonomy against higher levels of authority (Rhodes, 2007). In the EU context, governance refers to "methods or mechanisms for dealing with a broad range of problems/conflicts in which actors regularly arrive at mutually satisfactory and binding decisions by negotiating and deliberating with each other and cooperating in the implementation of these decisions" (Schmitter 2001, p.8; cited in Jasanoff & Martello, 2004, p. 2). The governance concept is commonly used in environmental and sustainability research, including climate and energy politics (Jänicke et al., 2015).

Reflecting on these perspectives, this study perceives governance as sets of real and potential political arrangements reached between different actors in order to organize the ways they will

address common problems or challenges and reach certain goals. The ways these arrangements are organized, the power and influence actors can or may exercise through these arrangements, as well as factors that influence them are at the heart of this study. A particular focus is placed on the role of foreign interventions in governance systems. The study examines a *domestic* climate governance system rather than global, transnational or regional ones (Bulkeley et al., 2012), and in particularly it refers to polycentric governance systems (Ostrom, 2010).

The concept of polycentric governance was developed by Elinor and Vincent Ostrom (Ostrom, 2010), who originally used it to explain the management of natural common resources, such as oceanic fisheries. Later studies utilized this concept in relation to other areas of research, including the governing of (global) climate problems.

At its core, a polycentric system approach rejects hierarchical control and authorities and favors the dispersity of authority over a certain concern. Morrison et al. (2017) portray polycentric systems as autonomous units that work independently in multiple jurisdictions and that have the capability to adjust to changing conditions and exercise self-organized cooperation. In contrast, Aligica and Tarko (2012) view these systems as one domain with multiple decision centers and with institutional and/or cultural framework(s) which is/are organized spontaneously with little to no involvement at all of a higher authority.

To Cole, (2011, p. 405), a "true" polycentric system holds that "governmental units both compete and cooperate, interact and learn from one another, and responsibilities at different governmental levels are tailored to match the scale of the public services they provide." Similarly, Carlisle and Gruby (2019, p. 928) stress that "The decision-making units in a polycentric governance arrangement are often described as overlapping because they are nested at multiple jurisdictional levels (e.g., local, state, and national)," as well as including "special purpose governance units" across jurisdictions. These views differ from *polycentricity*, which refers to a more ideal-type governance on a large (even global) scale (Bernstein & Hoffmann, 2018).[3]

These definitions suggest that where polycentric governance dominates there will be political units that have 1) a relatively high degree of autonomy and less dependency on central authorities and top-down decision making, 2) the capabilities necessary to interact and organize on their own, and 3) the flexibility to develop and act concerning a problem or a challenge common to these units.

Morrison et al. (2019) view polycentric governance as one of four types of governance: monocentric, integrated, decentralized -- or polycentric. Polycentric governance may occur within a Multi-Level Governance (MLG) arrangement. MLG refers to the distribution of responsibilities and

[3] Bernstein and Hoffmann (2018) criticize Ostrom and some of her followers for trying to treat carbon issues as a global common. In their eyes, this view poses difficulties to govern and solve climate change.

actions horizontally and vertically across governance levels (Jänicke et al., 2015). MLG is used to analyze pluralistic and highly dispersed policymaking activity, where multiple actors (individuals and institutions) participate at various political levels, from the supranational to the sub-national/local (Stephenson, 2013). MLG is known for the Type I / Type II typology of governance "structures" or domains (Hooghe & Marks, 2003). Type I is a hierarchic (top down) system where authority and jurisdictions do not overlap and integrate: They are "nested, non-intersecting, general-purpose jurisdictions, i.e. the 'systemic' hierarchy of territorial units – municipalities, regions, states, international organizations" (Liefferink & Wurzel, 2018, p. 137). In contrast, Type II has "flexible, task-specific, overlapping jurisdictions" (ibid). Moreover, type I systems embed type II systems within them in that they provide Type II systems the legal framework and financial basis for their functions (Hooghe & Marks, 2003).

Both MLG and polycentric governance share commonalities and complement each other (Liefferink & Wurzel, 2018; Morrison et al., 2017; Wurzel et al., 2019). Both frameworks share core presuppositions such as the premise that there are different and multiple levels of governance and centers of authority (Wurzel, Liefferink, et al., 2019). Nevertheless, the MLG framework "normally assume[s a] stronger role of governmental actors," while polycentric governance "attribute[s] a high degree of autonomy to societal actors," such as Non-Governmental-Organizations (NGOs) and businesses (Wurzel, Liefferink, et al., 2019, p. 2).

Thus, some scholars see polycentric governance as aligning with the MLG Type II system: "The functional and scale-focused character of polycentricity resembles key features of MLG" (Liefferink & Wurzel, 2018, p. 137). Others even claim that polycentric governance and MLG are, in fact, identical ((Rayner & Jordan, 2013). See also integration of the two approaches in Homsy and Warner, 2015.) This alignment seems potent because both frameworks depend to some extent on the existence and actions of mono-centric systems (e.g., the state and international institutions).

This study rests on the notion that polycentric governance allows for a more flexible application of climate initiatives, especially for "messy" settings where multiple actors from multiple governance scales interact, sometimes with no clear structural or institutionalized form. Polycentric governance is a useful concept for framing the changes in the governance system examined in this study.

Another concept that is close to polycentrism is decentralization. Decentralization assigns responsibilities to institutionalized authorities situated below or away from a central authority. In the context of "the environment", decentralization involves "efforts to incorporate lower-level administrative units and social groups better into formal processes of environmental governance" (Lemos & Agrawal, 2006, p. 302). These efforts come as a reaction of the withdrawal of- and the loss

of faith in- the state's power to address environmental problems and manage natural (and other) resources, as well as penetrations of market mechanisms to governance interplays (Rhodes, 1997).

Decentralization and privatization,[4] two components of the New Public Management approach, have been praised for bringing about more efficient, democratic, and location-suited policies and actions to address societal collective challenges such as the climate crisis. New Public Management foresees that when private and public actors and services are set to reach a certain "public good", actors will self-organize in networks, coordinate, and address necessary functions to achieve a public good. However, others argue that fragmented governance functions lead to the contrary: they hamper action and weaken and blur democratic accountability. (See further in Den Uyl and Russel, 2018.)

In the context of this study, decentralization, and to some extent privatization alone would be insufficient perspectives to address the complexity of the multi-actor and multi-scalar reality at hand. Decentralization is seen as a process of and found within polycentric systems, whereas polycentric governance is a broader, holistic approach to address the governance system (Morrison et al. 2017) that this study is interested in.

Thus, polycentric governance has certain benefits compared to other concepts. For example, in terms of governing the "commons", a polycentric governance approach offers benefits such as better adaptive capacity to deal with challenges and institutional fit for managing natural resources and mitigating risks (Carlisle & Gruby, 2019). A key advantage of applying a polycentric approach is that it "allows for a complex landscape of potential climate leaders and followers," (Benulic et al., 2021, p. 2); i.e., understanding complex sets of actors that take different roles and engage in and are expose to different influences. Different types of actors/units in polycentric systems that are linked together but are "distributed across levels and issues, could more adequately and effectively address the complexity, magnitude, uncertainty, and abstractness of climate change" (Benulic et al., 2021, p. 16).

The literature provides that polycentric climate governance can be utilized through three different functions (or lenses), which are often conflated and confused (Jordan, Huitema, van Asselt, et al., 2018).[5]

- *A descriptive function*: *describing the form* of (given) governance system.
- *An analytical function*: providing a guiding framework to *approach and understand* a given governance system.

[4] Privatization of governmental services and functions.

[5] Notes taken by the author during Prof. David Huitema's talk in the panel "The Promise and Limits of Polycentric Climate Governance", at the 2018 Utrecht Conference on Earth System Governance. (Utrecht, The Netherlands, November 6, 2018.)

- *A normative function*: providing a framework or reference as to *how a system should* behave or evolve.

This study reflects on all three functions but focuses mostly on the analytical and descriptive functions and less on how the socio-political system it analyzes *should* be developed. The study does not seek to point to polycentric systems as a desirable form of governance, but rather understand whether, how, why and the degree it is able to function for governing climate concerns. in other words, the study seeks whether, how, why and the degree that the Israeli system presents elements or signs of polycentric characteristics in how it addresses the climate crisis.

2.1.2. Propositions

The literature provides five key propositions to articulate the conditions under which a system can or should be treated as a polycentric system (Dorsch & Flachsland, 2017; Jordan et al., 2018, pp. 12–21). As will be elaborated further in this chapter, this study reflects on these propositions to assess and understand developments in climate governance in Israel.[6] These propositions are drawn mainly – but not only -- from Jordan, Huitema, van Asselt, et al. (2018):

Self-initiation. Climate initiatives are likely to be initiated at the local level (i.e., not global, regional, or transnational) through self-organization of the engaged units. Local arrangements (should) work freely and coordinate according to (their) site-specific conditions. They are supposed to come up with solutions to the problems they face. These are not always the best solutions at hand, and not all actors are expected to have the ability or motivation to participate and collaborate with others. Therefore, a facilitator may be called in to influence these actors.

Spontaneous collaboration. Coordination and collaboration are key functions for polycentric governance systems, as having multiple decision making units alone is not sufficient (Carlisle & Gruby, 2019). These units should consider other units in both competitive and collaborative manners (ibid). In polycentric systems, actors are likely to collaborate with one another spontaneously and produce more trust. That is, units *interact* with each other as a means to adjust to a situation and/or address a problem. The degree of polycentricity of the system is determined "by establishing how interdependent each governance unit is vis-a-vis other units" (Pattberg et al., 2018, p. 171). In other words, the degree of polycentrism in a system is determined by its linkages (i.e., interactions).

Pattberg et al. (2018) identifies categories of linkages to identify the processes that shape interactions (albeit they refer to the global polycentric system): cognitive linkages, linkages through

[6] To each proposition Jordan, Huitema, van Asselt, et al., (2018) provide three different perspectives according to the three functions of polycentric climate governance research: descriptive, analytical and normative.

commitment, behavioral linkages, and impact-level linkages. Linkages include exchange of resources from within and from the outside of the setting they refer to.

Innovation and learning. The willingness and capacity of actors to experiment is likely to facilitate governance innovation and learning about what works and what does not. If one experiment fails, the system should be robust enough to learn from this failure and to experiment once again with or in other units/ways. Experimentation refers to on-site innovation, the process that leads to innovation, and new (innovative) practices that are presented to a certain domain (Jordan, Huitema, Schoenefeld, et al., 2018). Drawing on (sustainability) transition literature, experimentation in small niches can signal the potential (or the lack) of bringing a change (transformation) in other parts of the system or even the entire system (Geels, 2011; Hess, 2014). Following this line of thought, small units or small niches in polycentric systems can therefore signal for the larger transformation of other units in that system and even the ability of the entire system to go through transformation.

However, Voß and Schroth (2018) stress that we cannot ignore powerplays that shape experimentation, for example, who decides whether an experimentation takes place? Who participates in it? And what is being experimented? This means that examining experimentations and learning demands our attention to the politics and powerplays behind them, the ways actors work and pursue their interests, and the interactions between these actors.

Building trust. Trust is an essential element in polycentric systems because these kinds of systems are less dependent on a central authority that provides, for instance, guiding rules and enforcements (Cole, 2015; Ostrom, 2010). Instead, it is claimed that trust evolves faster when units are organized around an issue-area by themselves in a process that increases their collective ambitions. Moreover, unlike relations between countries, there is a bigger chance to build trust and promote collective interests at subnational levels. Trust is being formed through repeated interactions, direct participation, information sharing, monitoring or evaluation; yet how it can be encouraged to be built is under-researched (Cole, 2015; Jordan et al., 2018).

Overarching rules. Domestic / local (climate) initiatives are likely to work best when they are bound by overarching rules. These rules establish the goals and/or allow conflicts and the resolution of these conflicts in regards to exercising these rules. (See also Carlisle and Gruby, 2019.) Whether they are informal values and norms, or rather formal and institutionalized rules is still under debate. Depending on the conditions in the system that the rules were introduced to, the mere introduction of these rules can be regarded as a change in the system. However, empirical examination of these rules -- their origin and reasoning, their legitimacy, and the actors behind them -- are under-researched.

Carlisle and Gruby (2019) claim that there is still a need to systematically conceptualize polycentric governance, and they propose a "functional" model with the capacity of the governance system to fit the following three conditions:[7] better adaptation to social and environmental changes, providing institutional fit to complex (natural resources) systems, and mitigating the risk of institutional failure or resources loss. Carlisle and Gruby (2019) link these five propositions to the adaptive nature of the polycentric system as they portrayed it in their model: "Polycentric governance systems have been characterized as complex-adaptive systems," and their capacity to adapt to changing conditions has been "linked to the notion that they facilitate parallel efforts to experiment with different ideas and rule combinations which, when combined with information transmission and learning, can lead to institutional innovation to cope with change" (p.938).

The extensive literature on polycentric climate governance fails, nevertheless, to really get at several key issues concerning interactions, adjustments and communication among actors considering the five propositions (Jordan, Huitema, van Asselt, et al., 2018): are these propositions emerging autonomously or initiated by (other) actors? Is there a dominant actor that pushes or influences the others? What is the role of these conditions and their contribution to experimentation in and towards polycentric systems (Hildén et al., 2017)? Links between governance units in polycentric systems are under-researched: there is no agreement in the literature on "what constitutes a minimum level of independence in terms of norm- and rule-setting abilities of individual initiatives to constitute a polycentric structure"; and moreover, there are no defined or agreed "threshold values" for these linkages (Pattberg, Chan, Sanderink and Widerberg 2018, p. 184). This study addresses at least parts of these research gaps.

2.1.3. Scale

As this study focuses on dynamics of interactions between different types of actors from different types of governance levels and jurisdictions, an examination of scale in the context of polycentric climate governance is important. This is stressed, for example, by Newell et al. (2012), which identify scale as a key element to understand not only levels in which dynamics to address challenges regarding climate change and sustainability occur, but also changes related to these dynamics.

To date, research on polycentric climate governance tends to focus quite substantially on global and/or transnational interactions and governance mechanisms such as transnational city networks, public-private initiatives and engagements of international organizations or global non-governmental organizations (Bulkeley et al., 2012; Homsy & Warner, 2015; Jordan, Huitema, van

[7] Notably, Carlisle and Gruby (2019) stress that their model was developed to answer conceptual problems of polycentric governance systems related to natural resources problems (commons).

Asselt, et al., 2018; Jordan et al., 2015; van der Heijden, 2018). There is therefore a need to focus more on "singular initiatives… understanding the interactions between individual initiatives and the wider governance complex of which they are a part" (Bulkeley et al., 2018, p. 64). This focus implies focusing more on small-scale, site-specific initiatives in various domestic settings, and on linkages to transnational and local settings. Widening the scope of research in this way could enable a better, deeper understanding of the various dimensions of polycentric systems (van der Heijden, 2018). In addition, "messy" settings where the national and transnational (and sometimes the local) intertwine to tackle issues concerning the climate crisis at domestic levels are also under-utilized in polycentric governance research (Jordan, Huitema, Schoenefeld, Van Asselt, & Forster, 2018).

In addition, when studies of polycentric governance focus on scales other than the global they tend to address the global north (Bulkeley et al., 2018), as well as big emitters of global greenhouse gases (GHG) from the global south such as China, India and Brazil. Other countries -- the "other 50%" in global GHG emissions -- and what can be learned from them, are often neglected. Research also tends not to address countries that are late to adopt climate policies and initiatives (Wurzel, Liefferink, et al., 2019; Wurzel, Moulton, et al., 2019).

Lastly, research tends not to focus on the development or presence of polycentric systems (or their elements) in countries which have unitary / centralized political systems and, formally, weak subnational entities. For example, van der Heijden (2018) stresses that there is little empirical research regarding the role of cities in polycentric governance vis-à-vis their national rules and the legal frames they are bound to. Following this line of thought, the role of other actors from other scales such as non-state actors and the private sector seems under-researched in this context as well.

2.1.4. Actors

Polycentric systems may provide "new opportunities for multiple actors at multiple levels to take responsibility for initiating and implementing sustainability and resilience solutions" (Morrison et al. 2019, pp. 1–2). Polycentric systems may also provide "opportunities for representation of different social actors than monocentric governance" (ibid). The type of actors matters, therefore, to the constellations which may present elements of polycentric systems. The following subsection identifies key actors in polycentric systems that will be addressed throughout this study.

2.1.4.1. The state

Since the 1990s there is a growing acknowledgment in research of the "hollowing out" of the state. This means that key governing and policy functions, from welfare and environment to foreign relations and security that previously run by centralized governmental functions, are handed to subnational

and non-governmental actors (Jasanoff & Martello, 2004; Rhodes, 1997).[8] Polycentric systems align with this development as they emphasize the role of actors other than the state in governance arrangements (Ostrom, 2010).

Recent studies have been asking to re-examine the role of the state in polycentric systems. They claim that while the state may not enjoy the central role it had until the 1980s, the importance of states in polycentric systems should not be undermined. For example, Setzer and Nachmany (2018, p. 48) claim that the state can serve as a "particular polycentric domain, where state institutions and social actors interact," and from which knowledge and policies related to the climate crisis are scaled (or not scaled) to subnational and non-governmental spheres. This view aligns in some respect with Aligica and Tarko's (2012) perspective on polycentric governance (see above).

The legislative, executive and judiciary powers, and the ability to mobilize actors, provide the state a key role in polycentric systems (Setzer & Nachmany, 2018). This role is also highlighted by Morrison et al. (2017), who claim that a polycentric system that is "free" from the state level may be powerless because of the weakness of the system, or its lack of enforcement and regulative powers. Having a more equal role to other actors than in hierarchic modes of governance, central authorities (i.e., state-level authorities) can be integral part(s) of the exchange of resources that takes place in- and that are crucial for- polycentric systems (Pattberg et al., 2018).

However, two major elements have been scarcely addressed in research concerning states in polycentric governance, and that this study aims to complement, are: 1) addressing the type of a state and its political systems in the context of climate action – e.g., unitary political system; and, 2) addressing linkages of the national (state) level with other actors such as foreign subnational levels and non-state actors.

2.1.4.2. Subnational and local level actors

Cities and other subnational entities such as states in federal nations have been identified as key actors in advancing climate actions and implementing sustainability in various governance arrangements (Bulkeley, 2010; Jörgensen et al., 2015; Schreurs, 2008; Wallner et al., 1996). However, subnational entities do not work in an "empty" space, but they are rather tightly linked to other actors and the political and governing systems they are part of. For example, Bulkeley (2010, p. 233) claims that it is "necessary to consider how, why, and with what implications other actors are seeking to govern the climate *through* the city." (Emphasis added.)

[8] The hollowing out of the state is dated to the 1970s, yet since the early 1990s this process has been increasing as a result, e.g., of globalization and improved communication systems (Rhodes, 1997).

Cities can be part of polycentric systems and/or contribute to these systems. Through polycentric efforts, "cities may engage and motivate multiple formally independent yet interconnected actors, such as private businesses and civil society groups" (Hofstad & Vedeld, 2021, p. 496). For example, Hofstad and Vedeld (2021, p. 501), articulates polycentric characteristics of the climate change governance at and with cities: "climate ambitions and climate action emerge in part from an array of self-governing initiatives by private businesses and civil society actors complementing the city's own policies and reach."

This view echoes van der Heijden (2018) who claims that cities can be seen as separate units in polycentric systems. Cities and the networks they engage in are, in part, independent actors that organize themselves around certain (urban) climate challenges and the efforts to find solutions to these challenges. The organized activity ranges beyond the municipality and can be scaled up, reaching even to the international level, under rules that were formalized to some degree by the cities and the other actors they are engaged with. These structures form multiple governing authorities that act at different scales and have considerable independence from higher authorities to form and implement rules and norms (ibid). What influences these activities and the links cities have with other actors remain, nevertheless, under-researched in the context of polycentric (climate) governance (van der Heijden, 2019).

van der Heijden (2018) identifies three, inter-twined roles cities have in polycentric systems (see also in Bulkeley et al., 2015):

Advancements: Cities promote agendas to address the climate crisis that are compatible or even greater than the national (climate) frame they are subject to. Cities thereby gain access to knowledge and technology to tackle climate change, and the capabilities to utilize them. The support cities receive from the national level, however, should not be underestimated.

Experimentation: cities are both sites for and actors in experimentation and governance instruments of climate actions (Wolfram et al., 2019). These initiatives may involve other actors such as non-state and private actors in structured processes and by exercising new forms of authority and governance in the city (van der Heijden, 2018). In addition, the scaling out of urban experiments to other actors and/or governance levels provides cities with an agency function to mobilize others to act (Bulkeley et al., 2011; van der Heijden, 2018).

Authority: The emergence of trans-local collaborations such as municipal and city-to-businesses networks challenges previous views of cities' authoritative capabilities. Cities break the traditional top-down, national/central-local political hierarchy and collaborate with foreign "others".

These roles imply for the active position that cities take to address concerns over the climate crisis. Alongside this active role, Bulkeley et al. (2011) add two more roles:[9] one is a passive role, in which cities serve merely as the physical site where (low-carbon) transitions take place, and the other is in between passive and active roles, in which cities are participants in transformation processes. These transitions are inter-twined with respective governance arrangements and are occurring in relations with other stakeholders and across other scales. However, understanding the three roles in settings of multiple influences and in the context of polycentric systems is under-researched.

In relation to the abovementioned roles of cities, Hofstad and Vedeld (2021) point to three themes common in urban climate governance literature: urban experiments to achieve (climate governance) innovation, the participation of cities in city networks that serve as platforms for learning and innovation and, lastly, addressing cities as leaders or pioneers in climate initiatives at regional or global levels.

However, several gaps remain in researching cities in the context of polycentric climate governance. First, despite the optimistic view that some studies present regarding capabilities of cities – as units in polycentric systems - to advance climate actions there is a growing critique of the limited success cities have had in contributing to GHG emissions reduction worldwide,[10] (Hoornweg et al., 2011; van der Heijden, 2019). More critical assessments and empirical examinations regarding the changes in the authority of cities, their experiences with experimentation, their agency in climate governance systems and their normative power are needed (van der Heijden, 2018, 2019). In addition, gaps remain in our understanding of the role cities have in leading climate action and/or climate innovation in polycentric governance systems. Wurzel, Liefferink, et al. (2019) identify a gap in research into the role of subnational and non-state actors (including the private sector) as leaders and pioneers in climate governance. Questions to be asked include: who are leaders? How and why do they choose to act? Hofstad and Vedeld (2021, p. 498) stress the importance of learning about "how the city leadership may contribute to more effective climate transformation," the limits and barriers to performing a leadership role and "the possible leadership strategies that are capable of mobilizing and influencing a polycentric landscape of actors at various scales and in different sectors." Lastly, there is a gap regarding the forces that influence cities to exercise or lead climate initiatives. Especially, "effective polycentric urban governance depends in a major way on *external actors* for successful transformation", given that knowledge and expertise from within the city are not (always) enough to develop urban climate initiatives (Hofstad & Vedeld, 2021, p. 504. Emphasis added.) Moreover, "city

[9] Bulkeley et al. (2011) address these roles under "low-carbon transitions."

[10] See, e.g., in https://www.ipcc.ch/sr15/ (Last accessed March 05, 2020.)

climate leadership is dependent on a set of actors, their ideas, knowledge, and resources, for effective co-governance" (Ibid).

2.1.4.3. Non-state actors

Recent decades have shown an increase in the work and engagement of non-state actors[11] (NSAs) in climate governance. NSAs collaborate, produce, and transfer knowledge, and they can implement policies and practices as well. NSAs can be found in relationships and interactions with other actors, for example, in climate networks and international forums (Allan & Hadden, 2017; Andonova et al., 2009; Hadden, 2015).

In global climate governance, interactions between state and non-state actors provide the latter with a significant role in emphasizing and bringing issues such as justice, legitimacy, and the effectiveness of the Paris Agreement into focus. In terms of justice, NSAs enable agency functions in other actors, or they can help them to gain access to, for instance, decision making circles. Legitimacy is gained through NSAs encouraging participation and strengthening the representation and accountability of other actors in relevant forums and platforms. Lastly, in terms of effectiveness, NSAs enhance transparency, oversee compliance of public sector's commitments and affect outcomes of policy and decision making processes (Kuyper et al., 2018). These capabilities and actions show how NSAs can structure, facilitate, and perhaps put obstacles to efforts made by (other) actors to address climate concerns.

As with central (state) and subnational (city) actors, research on NSAs in the context of climate change tends to neglect complex environments where the former act with, and alongside, other actors from different governance levels, especially from foreign domains. There are gaps in research concerning agency function of NSAs in global and other constellations (Nasiritousi et al., 2016) and regarding these functions exercised by other types of actors (Dellas et al., 2011).

A specific type of NSA that is relevant to this study is think tank(s). Think tanks can be public, non-for-profit or private organizations that conduct research and/or analysis regarding issues with a public interest and produce research outputs such as reports, conventions, lectures, workshops and publications (Thunert, 2008). Think Tanks have a special, growing role in policy making processes and in domestic and foreign politics because they produce knowledge and/or distribute it. The knowledge behind their work is sometimes rooted in the ideology and agendas of their funding parties.

Think tanks differ from NGOs and other NSAs in that they are not always oriented to address a specific project or action. Rather, they can *initiate* actions and provide knowledge to justify or to support others to take a certain action (Pautz, 2012). For example, think tanks refrain, in general, from

[11] Non-governmental actors that are not private entities.

working with local communities and doing on-the-ground projects. Rather, they will build a network of experts and decision makers with the aim of reaching a certain policy/political goal; and often they collaborate with a wide network of domestic and foreign stakeholders to reach their goals. In many cases, the outputs of think tanks are "targeted to identifiable audiences with the hope of influencing decision-making and public opinion" (Thunert, 2008, p. 33). These outputs provide governments and the public with new tools and knowledge to take certain decisions.

However, despite the growing role think tanks have in climate governance arrangements (Stone, 2012), how and why think tanks shape -- and are being shaped by -- policies and practices, as well as their ways to mobilize others to act, are under-researched. Various works have addressed the role of think tanks in international and domestic politics, their role in transferring and producing knowledge and, also, in mobilizing action (Pautz, 2012; Stone, 2004; Stone & Ullrich, 2003). Nevertheless, to date, little focus has been given to the role of think tanks as agents in domestic-foreign relations in the context of climate governance arrangements.

Lastly, individuals are a unique type of NSA that is relevant to this study, yet to a lesser extent than the abovementioned NSAs. The role of individuals in mobilizing and influencing others is best exemplified in, for example, the huge influence Greta Thunberg has had on global youth movements in the late 2010s such as the Fridays For Future movement (Thew et al., 2021). Individual actors with enough political power and/or leadership capabilities are important actors in polycentric systems (Wurzel, Liefferink, et al., 2019). While this study does not focus on the role of individuals in interactions and governance outcomes, the study recognizes and examines certain individuals that were important to a specific sector or organization in relation to the context of this study.

2.1.5. Power

As mentioned briefly in chapter 1, the environment and climate concerns in Israel are perceived, in general, as neutral and apolitical in the eyes of the public and politicians. This means that, on the surface, climate issues are "absent" in powerplays between actors, or they are missing in actors' pursuing their interests. (See more in chapter 4.) Taking the view of Bachrach and Baratz (1962) and Lukes (2004) regarding hidden, indirect types in which power and influence can be gained, this study examines power relations and mechanisms of influence in the Israeli climate context vis-à-vis influencing actors and their power to shape governance systems. The study adds to existing literature by addressing the "unnoticed" or hidden channels in which foreign actors influence Israeli actors and, through that, climate governance arrangements in the country.

By and large, power and power-relations in polycentric systems concerning the climate crisis and sustainability are under-researched. Morrison et al. (2019, p. 2) stress that research has not focused enough on the (powers behind) the initial design or the "emergent structure of polycentric

systems," as well as ignoring the "uneven power dynamics or relegating them [power dynamics] to being exogenous to the system." And, analyses "tend to focus on the potential negative effects of (higher-level) power; they rarely highlight the process nor the positive outcomes of powerful steering or 'orchestration'" (ibid).

Polycentric governance research also tends to neglect hidden power dynamics by actors and functions that mobilize others to take action. Scales and jurisdictions related to these power dynamics are neglected as well (Morrison et al., 2019; Morrison et al., 2017). Aiming to close this gap, Morrison et al. (2019) introduce three types of power that (may) fit to polycentric systems: 1) power by design, i.e., authoritative power to set rules and design incentives, including, for example, orchestration[12]; 2) pragmatic power, i.e., low-level and/or less visible power such as interpretation, monitoring and compliance that are rooted in daily practices and formal and informal rules and norms; and, 3) framing power, i.e., power groups frame narratives and push things on the expense of other, weaker actors. These types are not bound to a particular governance level or an authority. This typology is helpful to understand power relations in polycentric governance, especially in the types of interactions that the study focuses on. This study therefore attempts to add and /or to challenge this typology.

Morrison et al. (2019) continue with four research areas that demand further developments: 1) what matters, and how, in power dynamics in polycentric systems? 2) what dynamics have an impact on functions and beneficiaries of these systems? 3) what happens when polycentric systems encounter other forms of governance systems? There is a need to explore more as to "whether and how different types of power are appropriate for different desired outcomes at different scales and at different points in time" (ibid, p.6.). And, lastly, 4) how does the agency-structure tension (Newell et al., 2012) relate to power dynamics in polycentric systems? Especially, further understanding is needed regarding "the potential for some types of polycentric arrangements to be more empowering of environmentalist agents than others, and indeed to facilitate further empowerment" (Morrison et al., 2019, p. 6).

Another research gap with relevance to this study is the power of knowledge in polycentric governance. As noted throughout this section, knowledge transfer is part of the interactions between units that comprise polycentric governance. (For example, in learning and innovation, as well as in the role of actors.) According to Tosun (2018, p. 153), polycentric governance allows diffusion and, at the same time, diffusion is an outcome of polycentric governance. However, we are missing assessments and understanding of outcomes and processes that are related to developing and using knowledge in the context of polycentric (climate) governance (Hildén et al., 2014).

[12] Orchestration is one analytical framework to analyze the phenomena in this study.

The power that is embedded in knowledge and that is derived from experimentation is under-researched as well: experimentation can be regarded as making "politics by other means," because knowledge that is generated in experiments can be mobilized and used to support or justify certain means and decisions of those in power of these experiments. (Turnheim et al., 2018, pp. 10–11. See also in Voß & Schroth, 2018.) In addition, the power relations between agency functions and knowledge in the context of polycentric systems and how knowledge makes an impact in different types of processes demand further analysis (Dellas et al., 2011).

The last aspect of power relations in polycentric governance that is relevant to this study concerns leader-follower relations. Leaders actively seek to attract followers, while pioneers focus on reaching something before everyone else, that may be set as an example to others (Liefferink & Wurzel, 2017, 2018). In turn, followership is "adoption of a policy, idea, institution, approach, or technique for responding to climate change by one actor by subsequent reference to its previous adoption by another actor" (Torney, 2019, p. 169). Followers may follow leaders according to the internal or external ambitions of the leader. For example, the leader having concrete measures to reach targets or having symbolic or ideational significance in the eyes of the follower (ibid, p.172) or in the eyes of others that influence the follower.

A key problem in understanding leader-follower relationships in the context of polycentric systems lies at the very nature of these systems: having several centers (units) of decision making and authority makes it difficult to determine who influences who through leadership (Torney, 2019). Thus, three questions arise when approaching leader-follower relations in polycentric contexts (Torney, 2019): 1) who follows who, i.e., what type of actors are involved? 2) What kind are these relations? Leaders can, for example, attract followers via coercive means or by giving them incentives and presenting appealing models, knowledge, or performance. And, 3) What hinders or facilitates followership? And what about the fractions that may exist under the surface between leaders and followers may influence certain (potential) achievements of polycentric systems (Benulic et al., 2021)? These aspects point to what resources are available to actors, as well as to their power-relationship and the ability of actors to gain legitimacy and to be attractive to followers.

2.1.6. Summary of key gaps and shortcomings of polycentric climate governance

Section 2.1. showed that terms of *Agency function, scale, powerplays* and *exogenous influence* in relation to polycentric systems are under-researched. **Agency** refers to the roles of actors and the relations between diverse types of actors in bringing change into the (governance) system. This study therefore re-assesses this function at state and subnational levels and regarding NSAs (ENGOS and think tanks). **Scale** refers to the "messiness" of governance levels that form the domestic political setting where interactions are occurring and (potentially) bringing a change. **Powerplays** refer to the

dynamics between the actors, i.e., who leads and who follows? And who influences whom, and how? Lastly, climate polycentric governance research is still missing an understanding of **exogenous influence** on this type of governance. This influence refers to external / foreign actors' ways of operation toward domestic actors in the latter's domestic setting.

These gaps correspond with what Carlisle and Gruby (2019) stressed regarding the need to further investigate polycentric climate governance: 1) under what conditions, and through which degree of polycentric governance system, could we expect new or modification of policy or other outcomes? 2) What is the quality and degree of autonomy of units in polycentric systems that is necessary for their performance (function)? 3) What kind of coordination and collaborative mechanisms exist between actors / units in polycentric systems? And, what are the power plays between them? These gaps also refer to a general concern in polycentric governance debates, which is the ability of this kind of system to address and improve (political) dilemmas that arise when addressing the climate crisis (Morrison et al., 2017).

In addition, researchers of climate change and other environmental concerns in the Israeli context have rarely used polycentric governance framework(s). Challenging the notion of the centralized (unitary) system that prevails in Israel, new forms of engagement, e.g., by state and non-state actors in climate and sustainability-related municipal initiatives, have gained scholarly attention (Barak, 2020; Dor & Kissinger, 2017; Hatuka & Zur, 2020). Feitelson (2018) and Shmueli, Feitelson, Furst and Hann (2015) have addressed elements of sustainability in planning policies and practices that flowed from the national to the subnational levels in Israel and vice-versa. Tal et al. (2013) have looked into the roles and challenges of Israeli ENGOs amid the climate crisis, and Goulden, Erell, Garb, and Pearlmutter (2017) have examined the powers and mechanisms behind the formation of standardization of green buildings in Israel – also in relation to non-state actors. The roll of brokers and intermediaries in allocating knowledge and translating it to policies was examined through the Middle Out perspective (MOP), which focuses on the role of professionals and experts that draw from bottom-up initiatives and top-down governmental approaches to exercise influence and advance certain goals (Zohar et al., 2021). Nevertheless, inquiries concerning the roles and initiatives of the third sector/civil society concerning climate and sustainability are limited in number (cf. Dunetz, 2020; Shefer, 2018).

Likewise, what is essentially missing from current debates is addressing the Israeli local level in policy and/or governance perspectives, and addressing local developments in wider contexts of actions that can be attributed to tackling the climate crisis in the country. The few exceptions include, inter alia, Goulden et al. (2017), who provided insights into green building standardization as governance mechanism at the local level; and Shefer (2019), who analyzed learning mechanisms and

their deficiencies in the urban climate governance in the (Israeli) City of Tel Aviv-Yafo. More insights into changes of governance and political processes amid the climate crisis, such as the recent decentralization and engagements of the third sector in these processes are under-researched.

Lastly, there have been studies that addressed or integrated aspects of polycentric systems in research about Israel, for example, regarding water governance (Feitelson & Fischhendler, 2009), or waste management (Broitman et al., 2012). However, substantial gaps remained in the nexus between knowledge production and transfer and the formation or alternation of governance considering polycentric or even multi-level governance perspectives in the Israeli context; especially, considering the context of responses to the climate crisis by Israeli actors. This study aims at contributing to closing these gaps in the Israeli context while, at the same time, drawing potential insights from them to further benefit polycentric governance scholarship.

2.2. Paths of transferring knowledge

This section addresses knowledge transfer mechanisms that lead to governance changes and that are driven by soft power approaches (subsection 2.4.). I draw on two strands of literature tied to knowledge transfer: policy transfer and orchestration. The last section in this chapter provides an integration of these two concepts into one analytical concept. Both approaches serve as mechanisms to deliver and implement certain ideas and professional experience in different, but complementing, forms.

2.2.1. Policy transfer

The following section elaborates on the components of policy transfer, its applications in relation to the aims of this study and, finally, research gaps concerning this concept that this study addresses.

2.2.1.1. What is policy transfer?

Policy transfer is the process of producing, mobilizing, and acquiring knowledge to produce certain outcomes. It is "the process by which knowledge about policies, administrative arrangements, institutions and ideas in one political system (past or present) is used in the development of policies, administrative arrangements, institutions and ideas in another political system" (Dolowitz & Marsh, 2000, p. 5).

Policy makers from different governance levels have been driven in recent decades to engage in policy transfer as governing tasks have become highly complex and are characterized by many uncertainties (Evans & Davies, 1999). Organizations are continually and increasingly searching for answers from outside, in governmental and non-governmental arenas (Evans, 2009a; Rose, 1991). Rose (1991, p. 3) observed that "confronted with a common problem, policy makers in cities, regional

governments and nations can learn from how their counterparts elsewhere responded." In this regard, actors tend to prefer and prioritize information that is already available to them and that has already been tried before over policy options that were not tried or adopted in other places (Jörgens, 2004).

Policy transfer is an umbrella concept that incorporates a "vast domain of policy-making activity" that classifies occurrences of knowledge transfer, be they "voluntary and coercive, temporal and spatial" (Evans, 2004, p. 20). Evans (2009b, 2019) divides policy transfer into three main approaches: diffusion, which is occupied with large scale influence; process, which focuses on actors' learning; and, ideational, which is occupied with how "systems of ideas" influence actors. Policy transfer encompasses other policy frameworks and concepts such as policy learning and lesson drawing. In lesson drawing, recipients/learners learn about and from the circumstances that surround the political system; while in policy learning the focus is on the reasons to adopt a particular policy that works in another political system (Evans, 2004). Lesson drawing, however, was criticized as being organized too "neatly" and addressed as a neutral, a-political process of learning (de Jong, 2009).

2.2.1.2. Policy transfer vs. other concepts

Policy transfer intersects with policy diffusion, policy convergence or isomorphism. Policy transfer differs from the last two concepts in that it focuses on the process of (knowledge/policy) transfer, that is, the characteristics and content of what is being transferred (Holzinger et al., 2009). In contrast, convergence emphasizes that transfer may not occur intentionally, by the actors, but rather as a result of, inter alia, economic forces or broader societal processes. In contrast, policy transfer emphasizes an intention of actors to learn and implement new knowledge, either voluntarily or coercively (Evans, 2009b).

Diffusion and policy transfer stem from a similar approach, where ideas are transcended and travel across jurisdictions; often because of a need or a will of policy and decision makers to address a certain problem to which they cannot find sufficient answer in their domestic domain. Diffusion is the process in which innovation transcends over time from one source (of policy/knowledge) to other sources/actors. This process includes imitation and learning of information from one setting that affects another setting. Diffusion is better used for analyzing the spreading of ideas and knowledge over larger spans of time and scale than policy transfer is (Jörgens, 2004; Marsh & Sharman, 2009). This is because diffusion has a decentralized and loosely connected nature: Diffusion processes evolve in the accumulation of individual cases of imitation or lesson-drawing of the same new, innovative (policy) idea. Diffusion operates in a decentralized form and through relying on the attractiveness of the idea at hand (Jörgens, 2004). And while policy transfer is concerned with ideas, institutions, and programs, it usually focuses on specific, preidentified instances of "policy terms" that cross geographic

or temporal borders. Diffusion, in contrast, is concerned with ambient or general forms of ideas, institutions, or programs (Steinbacher & Pahle 2016, p.71).

Diffusion is in the same line with other international and transnational mechanisms that can influence domestic politics and policy making. According to Jörgens (2004, p. 249), "international stimuli can generally influence domestic politics through three analytically distinct mechanisms: multilateral harmonization, unilateral imposition and cross-national diffusion." Diffusion and policy transfer differ in their operation, level of obligation of actors to the cause and motivation of actors (ibid).

Diffusion aims to find adoption patterns, whereas policy transfer focuses on the content of policy and the process of the transfer itself (Holzinger et al., 2009). In addition, given the large scale of occurrences it is addressing, diffusion can be a result of unintended process made by several countries, in parallel to and in an uncoordinated manner, emulation or imitation of policy (Busch & Jörgens, 2005). Furthermore, diffusion research tends to focus more on the adoption stage rather than the *process* of transfer, and it tends to ignore the scope of policy change (Graham et al., 2013. Exceptions include, e.g., Ostrovsky, 2017).

Beyond the schools of policy diffusion and policy transfer, other approaches are available. For example, policy translation is an "analytical framework to guide scholars in understanding how policy agents engage with the categories of meaning, scale and contingency in the travel of ideas in order to advance their position in policy making" (Mukhtarov, 2014, p. 72). A key difference between transfer and translation of policies is that the former emphasizes the construction and the ever-changing nature of the policy whereas the latter addresses the transformation, the negotiation and enactment of policy, and the political placement and displacement of a policy (Mukhtarov, 2014).

There are several reasons why policy transfer is a suitable framework to use with knowledge-transfer processes addressed in this study. First, policy transfer is suitable for understanding the transfer of ideas that are small in scale and that are easily identifiable. Second, the transferred ideas are non-ambient and can be concretized by actors. Third, policy transfer focuses on intentional processes and it is actor oriented. Fourth, the concept is interested in certain concrete instances between actors and jurisdictions rather than the broader flow of ideas. And, lastly, policy transfer provides insights into the formation and political implications of the transferred ideas.

2.2.1.3. Applying policy transfer

There are three prerequisites for (policy) transfer: an "item" that transfers between jurisdictions, an infrastructure that allows information flow between jurisdictions, and transfer agents that use this infrastructure (Steinbacher, 2019). While policy transfer is a broad conceptual framework rather than a model with explanatory purposes (Radaelli, 2000), Dolowitz and Marsh (2000) and other scholars

referenced below suggest several key questions that can guide the analysis undertaken here. These questions can assist an analysis in determining aspects of transfer such as the scale and scope of learning and the political pressures involved.[13]

1. ***Who are the actors?*** By and large, policy transfer is an actors-based approach, i.e., it examines the actions of actors, their various degrees of intention, and where there are chains of influence among and between actors (Evans, 2019). There are many types of potential actors that are involved in policy transfer, ranging from public officials to policy entrepreneurs to think tanks and the private sector (Dolowitz & Marsh, 2000; Marsden, Frick, May, & Deakin, 2011). Evans (2019) identifies policy transfer as a process that is centered mainly around elite members.

   Relations between senders and receivers in policy transfer may form into leader-follower relations (Torney, 2019). Knowledge is transferred from the pioneer/leader (who has the knowledge) to the follower, who does not have it or wishes to acquire it. According to this view, actors are involved in powerplays that are inherent to the knowledge-transfer process. What policy transfer is often missing is the answer to the question of who *is not* part of the transfer process, i.e., who is included and who is not in knowledge transfer initiatives? (Evans, 2019) Adding to this view, Hall (1993) showed how changes in policy can occur with the help of brokers and third parties that generate knowledge, such as the private sector and the media. Including these perspectives on powerplays and the work of intermediaries in enabling change is thereby important when analyzing changes in governance systems. This approach is followed by this study.

2. ***Why do actors engage in transfer?*** Dolowitz and Marsh (2000) provide three reasons for engagement of actors in policy transfer: voluntary participation based on rational decisions (what Evans [2009b] identifies as lesson-drawing), coercive participation that is caused by actors' obligations or pressure from other actors, and a mixture of the two ("negotiated transfer" according to Evans [2009b] and Mukhtarov [2014].) According to Evans (2019), the coercive element is found especially in terms of putting pressure on developing economies to adopt exogenous (economic) policies; yet "mixed" reasoning can also be found in developed economies and in governance systems such as in the EU.

   These three reasons were identified as motivations of actors to engage in knowledge transfer (Shefer, 2019), i.e., asking what drives actors to participate? According to Evans (2009b), policy transfer is driven by four sources of policy change: global, international or

[13] I refrain from adding another guiding question concerning the barriers for policy transfer, which were noted previously by Dolowitz and Marsh (2000) because I dedicate a distinct section to analyzing barriers to knowledge transfer (see section 2.4 in this chapter).

transnational forces; state-centered forces; transfer networks; and, micro-level processes of policy learning. This study addresses the first three sources. Similarly, engaging in diffusion of innovative policies from external sources results from the following: the cognitive capability to form coalitions that enable actors to endorse new ideas; the degree of responsiveness to international stimuli; the ability to adapt to changes in order to integrate new ideas; and, the "temporality" of certain events and situations (Jörgens, 2004; Tews, 2005).

Lastly, actors may get engaged in policy / knowledge transfer to gain legitimacy to their actions (Jörgens, 2004). Obtaining and exporting knowledge is therefore a key driving force. However, scholars such as Evans (2009b) and Manwaring (2016) argue that policy transfer is better in analyzing the process of transfer (the "how") than the reasons for it (the "why").

3. ***What is being transferred?*** Transfer items include (policy) goals, content, instruments, programs, institutions, ideologies, ideas and attitudes and, lastly, negative lessons (Beermann, 2017; Dolowitz & Marsh, 2000; Stead, 2012). Exposing actors to innovation in the jurisdiction that (originally) developed the (transferred) knowledge can be another knowledge (transfer) item by itself (Salskov‐Iversen, 2006; Stone, 2012). Transferring an item in fact involves learning: the prior beliefs and ideological positions of the actors influence what and how they learn from others. This means that learning is conditioned and also subjected to the scale from which knowledge was originated (Gilardi, 2010).
4. ***Origins of transfer items.*** This refers less to a geographical position and more the socio-political context of the sender, i.e., the culture and the economic and political systems in which the transferred knowledge evolved (Massey, 2009). Transfer is likely to take place when the socio-political systems of the sender and the recipient of the knowledge are close to one another in some respect, even if they are geographically far from each other (Marsden et al., 2011; Salskov‐Iversen, 2006).
5. ***Degree of transfer***. Policy transfer moves across a continuum of four: copying (a direct and complete transfer of solutions), emulation (endorsing ideas behind policies or programs), a combination of the two (here, Evans [2004, 2009b] termed it a hybrid form of transfer), and, lastly, inspiration (the outcome inspires policy change but does not draw on the original policy) (Dolowitz & Marsh, 2000).[14] The first form of transfer (copying) aims to be essentially identical to the original transfer item whereas the latter (inspiration) relies mostly on the ideas behind the item rather than its concrete components. Stone (2012) identifies inspiration with

[14] According to Evans (2019), the hybrid degree is most common among developed economies.

mechanisms of transfer which aim to gain influence over others through soft, indirect approaches.

6. ***Demonstration of transfer***. This refers to the platforms by which transfer takes place in practice, such as the media, conferences or professional meetings (Dolowitz & Marsh, 2000). Demonstration of transfer implies the need to address the availability of resources so that actors can engage in these platforms, the readiness of actors to take part in initiatives, and the degree or availability of opportunities to approach these platforms (i.e., accessibility).
7. ***The success or failure of the transferred policy****.* This element relates to whether, how, and by whom implementation of the transferred knowledge takes place. It also calls for understanding what leads to failures (if and when they occur)? For Evans (2009b), implementation is one key element without which we cannot identify and analyze the policy transfer process. Any analysis needs, however, to address the subjective elements of success and failure, as actors may view an outcome differently. The subjective element in perceiving success and failure needs, therefore, to address the domestic political and social contexts where implementation takes place (Dolowitz & Marsh, 2012; McConnell, 2010). Drawing on diffusion, Tews (2005, pp. 73–74) stresses what matters in countries that are engaging and adopting policy innovation from the outside: "International stimuli to adopt nationally a certain innovation meet heterogeneous national capacities and actor configurations, which function as filters or – in other words – determine the national responsiveness to experiences from abroad."

   An expected outcome of policy transfer is, obviously, policy change. From the weakest impact to the deepest, policy changes are adding adjustments to an existing policy; initiating change in policy instruments; and, lastly, changing the goals of the policy (Hall, 1993). However, knowledge transfer can travel across governance levels (Dolowitz & Marsh 2000, 2012), and from this arises the need to address the impact of the policy transfer process on governance arrangements.[15] Lastly, learning has been identified as a process *and* an outcome of policy transfer and diffusion mechanisms (Evans, 2009a). Learning has a mobilization effect, as it can change beliefs of actors over policies and their impact (Gilardi, 2010).

These seven guiding points are helpful for understanding: 1) the identity and roles of actors within knowledge transfer processes; 2) the ways and forms certain interactions take place between actors and across jurisdictions;[16] 3) the scales in the transfer process; and 4) the outputs. These questions

[15] This question echoes Jörgens' (2004) claim that diffusion is a mechanism of (global) governance.

[16] Or, as Mukhtarov and Daniell (2016) phrase it, the "inter-jurisdictional movement of policy ideas." (p.595)

further direct the analysis to the politics and power relations behind knowledge transfer, and also to understanding the policy process itself (parts of it, or as a whole) (Evans, 2009a).

2.2.1.4. Summary of key gaps and shortcomings of policy transfer

Policy transfer has been used to analyze a wide range of knowledge and learning initiatives in transnational and global environmental contexts (Evans, 2004; Stone, 2012), between countries and national levels (Steinbacher, 2019), subnational levels (Beermann, 2017; Shefer, 2019) and non-state actors (Stone, 2004). However, transfer of knowledge in political settings that engages central, local and/or non-state actors is less common in policy transfer research. Powerplays are part of these engagements or that come out of them are under-researched as well (Mukhtarov & Daniell, 2016).

Second, policy transfer has been widely applied to analyze governance systems (Stone, 2012), climate governance systems (Betsill & Bulkeley, 2004) and multi-level systems such as the EU (Hulicka et al., 2021; Radaelli, 2000). However, there are still gaps remaining in coupling the policy transfer framework with governance systems: ”One theoretical framework that seems potentially fruitful… is the concept of governance. In particular, it seems important to examine how policy transfer relates to *differing modes of governance*” [emphasis added] (Dolowitz & Marsh, 2012, pp. 341–342). This is especially relevant to polycentric climate governance which, to date, presents little applications with or in light of policy transfer and other knowledge-transfer perspectives. (c.f. Tosun, 2018.)

Third, there are also gaps in analyzing changes (outcomes) that derive from policy transfer. Often the focus is on the policy change rather than political change (Gilardi, 2010). Steinbacher (2019) stressed how transfer processes are perceived as technical processes rather than political ones. These gaps correspond with one of the major aims of this study - understanding aspects of knowledge and learning as elements of changes in governance systems. There are also gaps in examining the changes amid foreign interventions that involve transfer of knowledge. Marquardt et al. (2016) showed how a donor country (Germany) contributed to changes in (energy) governance in developing economies through exercising niche experimentations, which added up to larger transitions towards renewable energy in Morocco and in The Philippines. Despite their different context, Marquardt et al. (2016) highlight the importance of interactions with foreign stakeholders in leading to changes in climate governance.

Other gaps concerning outcomes of policy transfer relate to non-adoption of policies that are linked to transfer mechanisms (Manwaring, 2016). What was not absorbed by actors requires attention, and so does the relevance of the potential implications of non-adoption for governance systems.

Moreover, the policy transfer concept has been criticized for not addressing the relevance of social constructs of senders and receivers, and their local contexts, to the policy / knowledge transfer

process (Peck, 2011). The movement of policy "is more than merely a transaction or transfer, but (it) entails the relational interpenetration of policy-making sites and activities, spawning phenomena like global policy 'models', transnational knowledge networks, and innovatory forms of audit, evaluation, and advocacy" (Peck, 2011, p. 774). Mukhtarov and Daniell (2016) add the political *feasibility* of implementation that is available in the domain of the receiver to the political, economic, and cultural contexts in the receiver's domain.

Failing to address these contexts means that the power relations between actors in the transfer process is being ignored. Often, transfer processes are perceived to be voluntary (rational), where "policies implemented elsewhere are examined by rational political actors for their potential utilization within another political system" (Evans, 2009b, p. 244). Factors that influence actors and institutional influences over the (actors-based) transfer process (McCann, 2011; McCann & Ward, 2012) are under-researched. Moreover, while policy transfer has been applied to understand soft mechanisms of influence regarding climate and energy strategies and policies in Germany and in the EU (Gänzle, 2007; Steinbacher, 2019), the efforts that the Union and Germany are making to gain influence over other societies in the context of tackling the climate crisis are less common in research. The power relations that are missing in much policy transfer literature are linked to gaps in understanding of the inclusion / exclusion of actors and the motivation of actors to take part in knowledge transfer initiatives.

Lastly, policy transfer and diffusion frameworks have been applied to examine various policy issues in Israel such as economic regulations (Magen, 2012). Although these frameworks were also used to address Israel's environmental challenges (Amdur, 2009; Ayalon et al., 1999; Ostrovsky, 2017), they are still less common in researching climate policies and governance there (cf. Nachmany, 2016; Shefer, 2019).

Considering the aims of this study and the gaps mentioned above, policy transfer is a useful analytical concept. Nevertheless, on its own it fails to address instances where there are complex settings of knowledge transfer, for example, when transfer takes place across governance levels (scales) and with multiple actors simultaneously. It also leaves open the question of the implications for governance systems that emerge out of knowledge transfer instances. The broad array of policy transfer literature provides useful insights into more direct and "simple" forms of transfer. There can be key challenges in finding evidence that transfer of item(s) has triggered a change in other (policy) domains. For example, according to Bennett (1991, p. 231), "the analyst must avoid the pitfall of inferring from transnational similarity of public policy that a transnational explanation must be at work." Evans (2009a, p. 238) claims that "policy transfer analysis alone cannot provide a general explanatory theory of policy change," but when it is integrated with other concepts or approaches,

"an empirically grounded account of policy change can be developed." This study follows this reasoning and thus complements policy transfer with an "Orchestration" framework.

2.2.2. Orchestration

A second analytical concept used in this study's knowledge transfer framework is orchestration. The following section elaborates on the components of orchestration, its applications in relation to the aims of this study and, finally, points out research gaps concerning this concept that this study addresses.

2.2.2.1. What is orchestration?

Orchestration is the process where one actor (a governor/orchestrator) uses a third party (an intermediary) to gain influence over another actor (a target) in order to reach certain goals (Abbott et al., 2012; Abbott & Snidal, 2009). This form of influence, which is sometimes defined as a form of governance (Abbott et al., 2012, 2015a) is known as the O-I-T model (Illustration 1):

Orchestrator → **I**ntermediary → **T**arget

Illustration 1: Indirect governance through orchestration (Source: Abbott et al., 2012, p. 2.)

Orchestration has roots in the New Public Management and the New Domestic Governance approaches. These approaches emphasize a "shift away from centralized administration toward the use of non-traditional, often private regulatory instruments" (Schleifer, 2013, p. 534). This involves reducing regulation, outsourcing functions and services that used to be in the hands of the central (national) level to the hands of private entities and the third sector, and favoriting market-based mechanisms to provide public services (Schleifer, 2013).

The O-I-T model is useful to understand interactions in constellations where one actor (the orchestrator) cannot reach its intended goals because it lacks something that others – the intermediaries – have. Thus, the model is useful for examining relations that involve more than two actors and indirect mechanisms, as well as power-relations which may be present. Orchestration can also be regarded as a soft mechanism of power which rejects more authoritative and direct governing modes (Abbott et al., 2015a). Each actor has a designated role:

The orchestrator. Early studies of orchestration identified orchestrators as states and international organizations (Abbott et al., 2012; Hale & Roger, 2014). The identity of orchestrators has since been broadened to address other actors such as think tanks, expert networks and private entities (Chan & Pauw, 2014; Gordon & Johnson, 2017). Gordon and Johnson (2017) suggest that "Orchestrators can emerge endogenously within transnational governance initiatives, or from the broader firmament of non-nation state actors engaged in the process" (p.701). The broad types of

identity of orchestrators implies their potential to take other roles in orchestrated relationships in parallel or instead of their orchestrating role, i.e., an intermediary and a target. This aspect is, however, neglected in research concerning orchestration.

The orchestrator lacks something(s) that could assist it in exercising its influence on the target(s) directly. For example, the orchestrator may lack access, authority or legitimacy to operate in a particular jurisdiction (Abbott et al., 2012; Abbott, Genschel, Snidal, & Zangl, 2015b). These inabilities lead the orchestrator to turn to intermediaries who are better equipped or qualified to fulfil governance functions toward the targets. The orchestrator may exercise the following actions to reach its goals through intermediaries (drawn from Abbott et al., 2012, pp.9-11): 1) Convene and steer actors. This means influencing the relations between intermediaries and other actors and pushing for certain agendas. Additionally, the orchestrator may strive to initiate or increase coordination among intermediaries; 2) Set an agenda by providing intermediaries with normative and/or cognitive support and legitimacy, as well as a reference point to draw upon when intermediaries approach the targets; 3) Providing material support for intermediaries such as finance or access to capital; 4) Endorsing the intermediaries with political or normative support.

***The intermediary*.** Much like orchestrators, the identity of intermediaries varies from state and non-state actors to private actors, NGOs and trans-governmental networks (van der Ven, Bernstein & Hoffmann 2017). Intermediaries possess capabilities that orchestrators are lacking. For example, the intermediary (should) have better expertise in the field in which the orchestrator wishes to influence the target, better abilities to set agendas and enhance (policy) credibility, better access and social or political legitimacy to act and, even, enhanced monitoring and adjudication (Abbott et al., 2012).

Intermediaries and orchestrators share their goals to influence the targets or targets' actions; and intermediaries and orchestrators are supposed to approach these relations on a voluntary basis. Moreover, intermediaries expect a certain gain out of their role (Abbott et al., 2012). At the same time, the more the orchestrator is (or may seem to be) irreplaceable and as a leader in its field, the more intermediaries will want to have relationships with it (ibid). The capabilities of the intermediaries can be real or desired, and in the latter cases the orchestrator may equip the intermediary with these means, or modify them, in order to mobilize the intermediary to reach the shared goals.

In some cases, orchestrators use meta-intermediaries, which can organize other or "lower level" intermediaries. This is seen, for example, in the United Nations Framework Convention on Climate Change (UNFCCC), which orchestrates meta-organizations that, in turn, work with many other smaller organizations to try to motivate states and other targets to address the climate crisis (Abbott et al., 2015a; Bäckstrand & Kuyper, 2017).

Abbott et al. (2017) have introduced a form of orchestration to regulatory processes, where intermediaries assist regulators or targets. This is known as the R-I-T model (Regulators-Intermediaries-Targets). In the R-I-T model intermediary may also "enter [the policy cycle] through orchestration, where a regulator or target encourages third parties to intervene in desired ways and provides support to facilitate their activities" (Abbott et al., 2017, p. 7). The intermediaries can provide "hard" measures (e.g., interpreting regulations to targets or monitoring compliance) or they may contribute through softer or indirect means such as creating dialog and trust between regulators and targets. The R-I-T model also stresses the politics and powerplays embedded in intermediaries' roles: "the activities of intermediaries must therefore be analyzed in terms of legitimacy, democracy, distributive impact, and efficiency" (Abbott et al., 2017, p. 8). It is important to evaluate actors' conflicting interests, as well as issues of accountability, transparency, and fairness (ibid). These aspects can be reflected in the O-I-T as well.

The target(s). Targets in the O-I-T model were initially identified as state actors or private entities (Abbott et al., 2012), but more recent studies have broadened that scope to actor collectives (Gordon & Johnson, 2017) and to the political setting (site) where related actors interact (Bendlin, 2020; Shefer, 2018). Eventually, the steps made by orchestrators and intermediaries should influence the targets, for example by developing or re-directing their actions towards goals, agendas and policies that are important for the orchestrators and the intermediaries (Abbott et al., 2012, 2015a).

2.2.2.2. Application of orchestrated relations

Orchestration differs from other mechanisms of influence in terms of the conditions that each link in the chain must fulfil to establish orchestrated relationships. In addition to the role of each link in the O-I-T model certain pre-conditions typically exist. These preconditions are drawn mainly from Abbott et al. (2012, 2015b) and consist of:

- The orchestrator and the intermediary share certain goals that they want to reach.
- The orchestrator and the intermediary depend on each other. One will likely lose its role in the relationship and the ability to reach the goals without the participation of the other.
- Orchestration is a voluntary process. The intermediary "agrees" to be mobilized to pursue the goals. The orchestrator cannot have direct control over the intermediary and the latter cannot have direct control over the target(s) (Gordon & Johnson, 2017). The mutual goals of the orchestrator and the intermediary assist in grounding the voluntary element of these relationships.
- Orchestration is more likely to be attractive to- and occur in- organizational atmospheres that encourage entrepreneurship.

Abbott and Snidal (2009) further distinguish between direct (or "directive") and facilitated orchestration. Direct orchestration refers to governments formally incorporating non-governmental initiatives[17] into their regulatory frameworks. This situation provides governments with greater control over the initiatives. Facilitated orchestration refers to organizations[18] which lack authority and the capability to perform direct type of orchestrated maneuvers. Instead, they use other means of influence to establish their authority, for example, through financial and technical support, providing intermediaries with legitimacy and the ability to participate in the formation of new initiatives. In this way orchestrators can gain influence over norms, procedures, and structures (Schleifer, 2013).

The distinction between direct and facilitated orchestration was also noted in Chan et al. (2018), drawing on what Betsill et al. (2015) refer to as "catalytic linkages", informal links between units of authority in climate governance, which enable actions to reduce GHG emissions and, at the same time, serve other purposes. These linkages can perform certain formal and institutional tasks. According to Chan et al. (2018), two types of catalytic linkages relate to orchestrated processes. The first is direct orchestration, i.e., the O-I-T model described above. The second refers to indirect forms of influence such as other orchestrated relations, or when other actors are inspired by these relations and their outcomes.

The broad array of forms of orchestration point to the potential of orchestrated relations to serve as an analytical concept for understanding interactions in which tasks and roles of actors may change according to different conditions and situations. This aspect is, however, underdeveloped in the orchestration literature. (See further below.)

In general, an expected outcome of orchestrated relations would be the target(s) changing their conduct in ways that align to the goals of the orchestrator and the intermediary. Orchestration at national and regional levels was found to bring diverse outcomes, such as, but not limited to, supporting non-state actors in performing their climate action, formulating visions and policies among actors, and eliciting new commitments among actors. By examining biofuels initiatives in the EU, Schleifer (2013, pp. 542–543) found that "orchestration provided EU regulators with a cost-efficient implementation mechanism," that allowed these initiatives to trickle to non-EU states. Interestingly, this process has also exposed a weak point of orchestration: orchestrators were under strong pressure from (private) lobby and interest groups that, eventually, influenced the policy making process.

Widerberg (2017) shows that orchestrated mechanisms may likely work when certain events, interests and motivations converge. In contrast, the goals, ideas, and ambitions of internal actors in

[17] Abbott and Snidal (2009) refer in their work to private initiatives.

[18] Similarly, the authors refer in their work to international organizations.

the process were proved irrelevant, whereas *external actors* influenced the process a great deal by providing, for example, material support for actors.

Lastly, the "catalytic linkage" that orchestration can entail and that was noted above was said to assist state actors to engage non-state and subnational actors in national and regional sustainability initiatives to formulate and realize the Nationally Determined Contributions (NDCs) for national GHG reduction (Chan et al., 2018). Following the 2015 Paris Agreement, countries have committed themselves to provide their NDCs to the international community on a regular basis.

2.2.2.3. Summary of key gaps and shortcomings in orchestration

Orchestration originally was developed to answer a research gap regarding the relations between states and international governmental organizations (IGOs) (Abbott et al., 2012). Later studies have continuously applied the framework further in the international arena (Abbott et al., 2015a). Bäckstrand and Kuyper (2017) identified orchestration as a "key mode" in global governance mechanisms, which is relevant also to climate concerns. Others used orchestration to examine types of transitional relations concerning the climate crisis, such as climate networks and global information platforms (Bäckstrand, Kuyper, Linnér, & Lövbrand, 2017; Chan & Pauw, 2014; Gordon & Johnson, 2017; van der Ven, Bernstein & Hoffmann, 2017). These developments present an increasing interest in examining various types of political relationships through orchestration.

However, little is still known about "real-world orchestration, its benefits, and potential complications" (Schleifer, 2013, p. 536). Research could benefit from better understanding of the "causes, mechanisms, and outcomes of orchestration across different policy areas, as well as different types of orchestrators" (ibid, p. 543). Orchestration is under-utilized in domestic settings, at national and regional contexts with or without transnational elements. (Exceptions include for example Bendlin, 2020 and Chan et al., 2018). This gap is also relevant to subnational settings that involve municipalities and (domestic) non-state actors. (Exceptions include, for example, Bendlin, 2020 and Shefer, 2018.) Partnerships that are not bound by structured forms of networks, or that involve several actors from several governance levels that together are operating in or toward a governance system are under-researched as well. And, likewise, situations where actors may exchange their roles in orchestrated relations have been scarcely addressed in the context of tackling the climate crisis.

Orchestration research has scarcely examined targets in orchestrated relations. Often, studies identify the target but do not go further with examining whether and how targets are affected by and react to orchestrated relations. (See, for example, Abbott, 2018.) Especially, more empirical cases are needed to examine orchestration in the context of this research, i.e., the operations of the EU and Germany beyond their respective borders in and toward domains of climate governance - the Israeli case included.

There are also concerns over normative considerations in and of orchestrated relationships. First, there is an inherent deficit in democratic legitimacy of orchestrated processes. With their activities, orchestrators influence populations that did not elect them, or that these populations have little influence over these orchestrators (Bäckstrand & Kuyper, 2017). According to Bäckstrand and Kuyper (2017), orchestration relationships should be legitimatized in more democratic ways. Second, as a soft mechanism of influence, the populations that are affected by these relations have little or no delegated authority to react to orchestrators' moves. Considering these two concerns, Bäckstrand and Kuyper (2017) suggest four values to assess democratic legitimacy of orchestration: assessing and measuring participation, deliberation (rationales for the rules in context), accountability, and transparency in the process of orchestration and among the targets.

Orchestration has constraining and enabling factors through its patterns of inclusion and exclusion (Thew et al., 2021). Inclusive orchestration is proactive, it revolves around receiving legitimacy and it attempts to engage a broad array of actors into the orchestration process. In contrast, exclusive orchestration aims to interact through a limited number of like-minded actors, who seek effective treatment for a specific issue (ibid). Key gaps also remain in how to evaluate the outputs of orchestrated relations. To overcome this gap, Widerberg (2017) develops an intervention-based evaluation which aims to "describe the intentions and guiding ideas behind an intervention," and where "evaluators map the entire logic chain of interventions" (p.721). In this evaluation, each step in the orchestrated process is evaluated distinctively.

2.3. Soft power

The third analytical concept in this study, soft power, is utilized to analyze the underlying powers that shape the knowledge transfer mechanisms that Germany and the EU are exercising in their interactions with Israeli actors, and which eventually lead to governance changes. Soft power addresses mainly the "sender" side of the knowledge transfer process. In this study the senders are the EU and Germany. The aim of this section is to elaborate on soft power as an analytical concept.

2.3.1. What is soft power?

One path that countries can use to exercise influence over other societies is through coercive means, or what is known as hard power. Examples include waging wars and exercising economic sanctions. In general, hard power has been in decline since the end of War II (WWII), and especially since the 1990s, due to globalization and growing inter-connectedness between nations, markets, and communities. Using soft means of persuasion, winning public opinion, advocating collaboration and preferring inclusive actions to find solutions to shared problems is perceived by states as more cost-efficient and beneficial to their interests than for example, exercising hard means of influence (Gallarotti, 2011).

Importantly, however, the 2010s and the early 2020s may point to a reverse course in terms of these developments. For example, the Russian war on Ukraine that started in February 2022 and the increase of populist and nationalist parties in the 2010s that resent globalization and support nationalistic sentiments point to this shift. This reverse approach to global order poses a challenge to global and national climate actions (Schaller & Carius, 2019). Nevertheless, soft means of power are still considered effective and desirable means of exercising influence (Chaban & Elgström, 2023; Nye, 2023; Orenstein, 2023). These conflicting elements are addressed shortly in this study in chapter 8 (Discussion and conclusions).

Soft power refers to "one country (that) gets other countries to want what it wants," using soft means of power (Nye, 1990, p. 166). The resources that the "sender" country uses for that purpose are, mainly, exporting its culture, ideology, and institutions. Soft power assumes that if a state (country) can "make its power seem legitimate in the eyes of others, it will encounter less resistance to its wishes. If its culture and ideology are attractive, others will more willingly follow." And, if this country manages to "establish international norms (that are) consistent with its society, it is less likely to have to change. If it can support institutions that make other states wish to channel or limit their activities in ways the dominant state prefers," this country may be able to reduce the "costly exercise of coercive or hard power" (Nye, 1990, pp. 166–167).[19] Put differently, soft power aims to gain legitimacy and acceptability to the soft power-exercising country (the "sender") in a target country, and the values, ideas and knowledge of the sender need to be attractive enough for the targets (Kroenig et al., 2010; Nye, 2004). The legitimacy / attractiveness of the sender also relates to the model of policy or the action that the sender represents, and which it transfers / sends to others (Steinbacher, 2019). Soft power countries invest in building a certain narrative and identity that would have an appeal (the "power of affect") which, in turn, they then transfer to other societies (Solomon, 2014). Assessing and understanding the perceptions and acceptance of the audience (recipients) are therefore highly relevant in applying soft power.

2.3.2. Actors

Soft power enablers / senders aim to mobilize others and have their interests align together. Research identifies senders and targets mainly as countries and usually in the international arena, and less as non-state and subnational actors (Bohas, 2006; Karakir, 2018; Mavrodieva et al., 2019; Solomon, 2014; but see debates on the role of other actors than the state in, for example, Garsten and Jacobsson, 2013). One response that evolved to address this void is public diplomacy. Public diplomacy is a governmental process of "communicating with foreign publics in an attempt to bring about

[19] See Gallarotti (2011), for a more elaborated debate over hard and soft power.

understanding for its nation's ideas and ideals, its institutions and culture, as well as its national goals and policies" (Tuch, 1990, p. 3; cited in Melissen, 2005a, pp. 11–12). The public became an actor that senders need to take into consideration when they operate toward the receiving country. Public diplomacy is increasingly interconnected with domestic occurrences in the enabling country, with domestic actors from the sender being brought into the public policy efforts (Melissen, 2005a).

Public diplomacy today is an integral part of policy making, by "selling policy and values" in ways that engage dialogue with foreign audiences (Riordan, 2005, pp. 188–189). The sender country needs therefore to target and invest resources to address the public or certain groups in the target country rather than focusing its efforts on the ruling elite alone (Melissen, 2005b).[20] Often these efforts are mixed with official diplomatic measures out of the belief that public diplomacy cannot be achieved if it is inconsistent with a country's foreign policy or military actions (Melissen, 2005a). Melissen (2005a) pointed to the work of non-state actors such as non-governmental and/or non-official groups in the sender country toward foreign audiences. A dialogue-based approach can be developed by non-state actors such as business associations, NGOs and civil society organizations which represent and deliver certain norms and values of the sender (Riordan, 2005).

The works and impacts of public diplomacy in domestic settings in the receiving country other than at the national level (Hocking 2005) is now gaining attention. In recent years there has been an increase in research that utilizes soft power and elements of public diplomacy to understand developments in subnational and regional contexts (Lawrie, 2017; Steinbacher, 2019). Complementary frameworks such as para-diplomacy have helped in better understanding and assessing such factors as the role of cities in serving their countries' diplomatic aims (Kuznetsov, 2015). Soft power and public diplomacy involving state and non-state actors are fruitful avenues for examining climate governance. Steinbacher (2019) is one of the first to have looked into the nexus of soft power and agency among domestic actors and, especially, subnational and non-state actors in climate policy making.

2.3.3. Applications and outcomes

Soft power can take various forms. Hocking (2005) made a distinction between hierarchical and horizontal models of public diplomacy. These models intersect; they both target the public rather than official authorities alone. In the hierarchical model, populations remain the target of soft power through application of public policy means by (foreign policy) governmental actors who utilize persuasive measures to try to reach their (policy) objectives. In contrast, the network model assumes

[20] Melissen (2005a) distinct between public diplomacy, propaganda, nation-branding and cultural relations. This distinction is, however, less relevant to the scope of this study.

elements of interdependence and common, shared interests on the part of all involved actors. In the network model, governmental actors are part of, rather than the steerers, of the network. This model is perceived as posing less obstacles to the ability of soft power to influence target audience because of the inclusion of more actors in pursuing shared goals, which then reduces the chances of any actors objecting to specific moves. Moreover, managing complex problems demands participation, resources, and legitimacy which a network may provide more easily or plentifully than hierarchical systems do. The network model is useful, but it nevertheless seems to be descriptive rather than operational of the situations where and mechanisms through which actors use soft power or are affected by it.

Gallarotti (2011) claimed that soft power research suffers from three key deficiencies: understanding soft power against changes in world politics that see a decline in hard-power measures; our understanding of how soft power works in real-life situations; and, thirdly, what are the operational means to assist policy makers to exercise soft power? To fill this gap, Gallarotti (2011) proposed a model that draws from bargaining relationships between nations, in which soft power is used as an empowerment tool to reach a nation's goals. Model of this type may, however, provide only limited understanding to soft power in the context of this study, which focuses less on power relations and bargaining positions between countries in the international arena.

To effectively apply soft power, countries must: 1) communicate to a target within the marketplace of ideas; 2) persuade the target to change its attitudes towards a political issue; and, 3) ensure that the target's (newly formed) attitude influences international political outcomes (Kroenig et al., 2010). However, these terms leave mute two important elements: the forms in which communication and persuasion should take place (i.e., how do mechanisms work?) and, second, what happens if the target is a domestic actor aiming at a domestic audience, rather than state-actors or the international community? The reactions of audiences to soft power applications in domestic settings, and especially regarding developments in climate governance systems, has only recently gained more attention (Steinbacher, 2019).

Soft power efforts are not necessarily aimed for *direct,* observable and immediate outcomes but, rather, for *diffusion* and creation of *waves of influence* (Nye, 2004). Drawing on the American experience with soft power, Kroenig et al. (2010) suggest two ways of enhancing the implementation of soft power. One way of implementation refers to preparing the "marketplace of ideas" in the target country and the other way is using, if necessary, *intermediaries* that have more credibility and legitimacy in the target country. This approach correlates with Riordan's (2005) suggestions to use intermediaries such as NGOs and business associations to gain legitimacy for political moves.

Lastly outcomes, Hall (1993) claimed that soft power entails a meta-power to set agendas and shape social relationships, structures and situations by intervening and altering the available possibilities and orientations that exist in the (target) social setting. Soft power also resembles Lukes' (2004) third order of power, i.e., leading persuasion and co-option with others to get them closer to one's preferences. This view is also visible in public diplomacy approaches. Gallarotti (2011) and, partly, Partzsch (2017) stress that power relations are important components for shaping soft-power outcomes. In a similar vein, public diplomacy does not provide information alone, but rather it also seeks to engage the target audience with its actions (Melissen, 2005a); exercising a certain degree of power to get the target to cooperate with the sender's aims. Further insights are required into the ways these relations occur and what shapes them, especially in the context of climate governance.

Soft power cannot, by itself, be applied to understand various processes and outcomes of foreign influence in the context of climate policy and development of climate governance systems. Therefore, this study complements soft power with the two other frameworks that this chapter already discussed: knowledge transfer and polycentric governance.

2.3.4. Soft power in the context of the climate crisis

With growing global concern for the environment since the early 1990s, addressing environmental issues has become one of the top concerns of foreign policy of many countries. Countries such as Germany and, recently, rising powers such as China put the global environment high on their agendas; and, in turn these domestic agendas helped gain these countries more voice and influence in the international climate arena (Chen & Lees, 2022; Karakir, 2018). Dealing with the environment has become a soft means of influence for some of these countries. For example, climate reports by the Intergovernmental Panel on Climate Change (IPCC) that emphasized the predicted harsh impacts of climate change on China were used by other countries as a leverage to make the Chinese government take on more commitments to address the climate crisis (Karakir, 2018).

Energy and, especially, renewable energy became another area where countries have tried to leverage soft power (Klare, 2015). At one level, the global increase of renewable energy changes the power of oil-producing countries to use fossil fuels as a bargaining leverage in international negotiations (Scholten, 2018).[21] At another level, renewable energies are used as a mean of persuasion in favor of a political model. For example, China attributed its fast and high growth of renewable energy in recent years to its (highly) centralized form of governance and the strong control of the state over lower political levels. China projected this growth in renewables as a model that is not only useful

[21] These claims were put to the test in 2022, with the Ukrainian war challenging some of these assumptions. See also brief discussions in chapter 8.

to tackle the climate crisis but also a better or, at least, a good alternative to the "western" approach to address climate change (Chen & Lees, 2022). Climate change is tightly linked to reducing dependency on fossil fuels and shifting to low carbon-intensive practices, and the power and influence of countries and societies that promote renewable energies and low-carbon practices may therefore increase (Overland, 2019; Scholten, 2018). This shift in power-relations in the global arena does not include states alone but also involves international organizations and other non-state actors (Carius et al., 2017).

Links between climate and energy policies and other initiatives, and soft power measures, are still under-researched (Gallarotti, 2011; Karakir, 2018). How do soft power measures in climate and energy come about? With whom and for whom? What are the outcomes of these actions? Who gains and who loses in these new global developments? These questions add to the criticism of soft power that was previously implied in this section which questioned the actual power of soft power to reach (senders') goals and targets (Gallarotti, 2011).

2.3.5. Soft power in the EU and Germany in the context of the climate crisis

This section elaborates on the soft mechanisms of influence that the EU and Germany exercise outside their borders concerning the need to address climate change.

2.3.5.1. The EU

The EU adopts soft means of influence to pursue its interests in international and global forums. This approach reflects the union's long-standing reliance on its economic and normative power rather than military power (Orenstein, 2023; Persson, 2018). It is the union's "power of persuasion," which is used to gain legitimacy and credibility among European populations (Michalski, 2005, p. 124-125). Values, norms and principles such as preserving liberal values of democracy, human rights and sustainable development constitute the backbones of the union's foreign policy doctrine. However, this approach is sometime perceived as weak in the international arena (*ibid*). The EU aims to influence others by soft, non-coercive means in the view that cooperation with, and strengthening of, partners would best serve the Union's interests. For that purpose, the Union sets standards and benchmarks that signal its partners in the international arena what are the desirable values that they should relate to when they collaborate with the EU (Tocci, 2008a). In parallel, when others change their perception or values in international politics it affects the determination of the normative power of the Union (Michalski, 2005).

Ian Manner's *Normative Power Europe (NPE)* (Manners, 2002) sketches five EU norms that are part of the EU and (should) lead to their adoption in other countries wishing to join the EU or work closely with it: peace, rule of law, liberty, democracy, and human rights. Aligning with the NPE's norms

allows neighboring and weaker countries to benefit from economic, political and cultural ties with the Union (see also Michalski, 2005, pp. 126–127). These norms have not changed substantially over the years (Müller, 2019).

Tocci (2008a) provides three dimensions of normative power: 1) normative goals, i.e., the aim to shape a certain Milieu's preferences and thinking.; 2) normative means, i.e., non-coercive actions that align with a soft power approach such as empowerment, political and technical support; and, 3) normative impacts, i.e., achieving institutional, policy and/or legal changes. The promoter of the normative power needs to pursue normative goals through normative means and achieve desirable normative and intended outcomes.

The EU's normative approach and soft power means are reflected in the European Neighborhood Policy (ENP) (Chaban et al., 2019; Gänzle, 2007). Dated from the early 2000s, the ENP is a strategy to turn countries neighboring the EU (North Africa, the Balkans, parts of the Middle East and former Eastern European countries) into allies. The ENP enables dialog and collaboration between these countries and between these countries and the Union itself. Through cooperation, the neighboring countries need to adapt themselves to EU regulations, policies, and standards; including those standards that relate to tackling the climate crisis. This approach has an inherent assumption that exercising cooperation with the EU can bring its neighboring countries closer to adopting the EU value system, at least partly (ibid).

Protecting the environment and promoting sustainable development are major pillars of the EU's norms and values which are integrated into its foreign policy (Burns et al., 2020; Gänzle, 2007; Michalski, 2005). Harnessing climate issues and sustainability as a soft power mechanism has been on the EU agenda since at least the 2000s (Oberthür & Pallemaerts, 2010; Tobin & Schmidt, 2020; Wunderlich & Bailey, 2010).[22] One of the most recent expressions of the EU's soft power approach in the context of the climate crisis lies in the Union's 2021 Green Deal policy. The European Green Deal is a plan to transform the EU into a climate-neutral economy by 2050, for example by setting concrete emissions reduction goals in specific sectors. Understanding that the climate crisis demands global action, and out of the Union's will to lead this action, a key element in this plan is investing resources in and support of emissions reduction beyond the Union's respective borders (European Commission, 2019).

A great deal of research examined exogenous and endogenous factors that influence the EU's normative power in the international arena, also in regard to efforts to address the climate crisis (Çelik, 2022; Larsen, 2014; Tocci, 2008b; Young & Ravinet, 2022). However, there are still gaps in our

[22] Other scholars take a different approach. For example, Youngs (2009) claims that energy issues cannot be regarded as EU's soft power elements but rather as hard power.

understanding transferring and absorbing EU norms in neighboring countries concerning these efforts and, especially, governance perspectives. Young and Ravinet (2022) claim that using EU knowledge, knowhow, and experience (the authors term this as "Knowledge Power Europe") could assist the Union to position itself as an international, influencing actor on issues with global concerns such as climate change and sustainable development. In addition, Melissen (2005a) stresses that public diplomacy was acknowledged as essential in the EU's foreign policy in regions with high level of cooperation and inter-dependence such as the ENP. (See also Chaban et al., 2019.) However, implementation of EU norms in neighboring countries, especially regarding collaborations with other actors than at the state level, is under-researched; especially, when it comes to climate initiatives that correspond to recent initiatives such as the Union's Green Deal.

Lastly, gaps remain concerning the EU's norms concerning the Union's leadership efforts for low-carbon transformations and reducing GHG emissions (Tobin & Schmidt, 2020). Afionis and Stringer (2012) showed a gap in the EU's self portate and projection of global green leadership in its energy policies, where ecoonmic interests may overcast sustainable development aims. Alternatively, Young and Ravinet (2022) show stress that sustainability and climate concerns are elements strongly inter-twined with the Union's value system toward economic development. But whether and how these values and views of the EU are projected to ENP countries is still under-researched. This gap in research is highly relevant when considering that one of the fundamental pillars of the European Green Deal is projecting climate actions outside its borders, and engaging in knowledge import and export to and from the Union with the international community.

2.3.5.2. Germany

Since the 2000s Germany is increasing its power and influence in global politics, mainly through a soft power approach (CPD, 2018; Lanshina, 2015). The country is taking the lead in promoting liberal values amid global divides between super powers such as the US and China (GIZ, 2018). Being a pioneer in developing and implementing renewable energy and other forms of sustainable use of resources such as in waste management and green building, Germany is one of the world's biggest advocates of reducing GHG emissions (Quitzow & Thielges, 2022; Schreurs, 2020). Even though the 2010s saw setbacks in Germany's pioneering global climate actions, the country is still enjoying a positive image as a global leader in tackling the climate crisis (Schreurs, 2016; Steinbacher & Röhrkasten, 2019; Steuwer & Hertin, 2020). (Germany's position and image as a global leader in energy transition suffered a blow after the invasion of Russia to Ukraine in February 2022. The war exposed how strongly was Germany dependent on Russia for natural gas supply, that was perceived as an intermediary solution to market in the transition to renewable energy [Wiertz et al., 2023]). The attitudes of leadership and pioneering role are present in Germany's environmental cooperation with

non-EU countries (Hatch, 2007; Jagaard, 2007; Quitzow & Thielges, 2022). Tackling climate change, reducing economic dependencies on fossil fuels and reaching more sound economic practices than in the past are perceived as soft power mechanisms through which Germany pursues influence in the international arena (GIZ, 2018; Steinbacher, 2019).

Germany's energy transition (*die Energiewende;* see also chapters 1 and 4) is integrated into the country's climate diplomacy efforts (Quitzow et al., 2016; Reis, 2017; Steinbacher, 2019). As a model to other societies, the *Energiewende* is drawing much attention (Quitzow et al., 2016; Schiffer & Trüby, 2018; Schreurs, 2013; Steinbacher & Pahle, 2016). Beveridge and Kern (2013, p. 4) noted that "With many countries keeping a close eye on events in Germany, Modell Deutschland ('Model Germany') is also of enormous international importance." Although the context and circumstances which gave birth to the German Energiewende are unique to the country, "the policies developed and implemented in Germany could be transferred to other countries if the German experience is successful" (ibid). Indeed, ideas and hands-on experience from the German energy transition are spreading to other European and non-European countries (Morris & Pehnt, 2016; Steinbacher, 2019).

There are gaps remaining in our understanding of the export and transfer of knowledge that is gained through the German energy transition to non-German and non-EU societies. Scholten (2018) addressed the geopolitics of the global shift to renewable energies, including the Energiewende. Global powers like China, the US and Germany are now competing for hegemony or at least a leadership role in terms of producing renewable energy and providing relevant expertise and know-how. These shifts, in turn, lead to changes in domestic economic and political systems in the receiving countries, as well as to implications on norms and values regarding energy and the (global) climate crisis. Moreover, "It might well be that, for the time being, expectations about the energy transition are going to affect energy geopolitics more than the actual use of renewable energy" (Scholten 2018, pp. 4–5). These words imply that the transformation toward low-carbon practices which Germany is going through and, importantly, the ways it is portraying this transformation to foreign audience, have larger effects over other societies. The normative and ideational implications are still under-researched and demand in-depth analyses.

In examining domestication processes of the German Energiewende in non-EU countries, Steinbacher (2019) focused on the leadership role Germany has in these processes, and the ways policies and ideas of the German model were transferred to, and implemented in, other countries. Steinbacher's (2019) analysis focused on policy making and less on governance arrangements and interactions between the stakeholders in the context of policy transfer. Similarly, links between soft power approaches and Germany's climate and energy policies were noted by Li (2016), who mapped the ways in which climate policy and renewable energy are tailored to German foreign policy. Li's

(2016) analysis pointed to Federal efforts that lead these paths and to the incorporation of other German state and non-state actors in these efforts; as well as to the institutionalization of efforts to promote renewable energy and tackle climate change abroad based on the German experience. Li's findings stressed Germany's emphasis on solutions based on market-mechanisms in its efforts to gain influence. However, Li's (2016) analysis is less focused on in-depth understanding of the processes by which these efforts took place, and real and potential outcomes that Germany's moves bring about in foreign (political) settings.

2.3.6. Summary of Key gaps and shortcomings of soft power

Key gaps in the literature of soft power that are relevant to the focus of this study are as follows. First, is the *process* of soft power mechanisms regarding the climate crisis and, especially, those mechanisms that involve public diplomacy initiatives. It is necessary to understand "what soft power actually means, precisely how it works, and what it takes to deploy it effectively" (Kroenig et al., 2010, p. 413). A second gap is the *identity of the actors and their function* in pursuing soft mechanisms of power. In this study it means identifying the roles of the sender(s) and the receiver(s) beyond the central level, and especially non-state and subnational actors. This gap also calls for better understanding of the powerplay between senders and receivers. Third, is *knowledge* in soft power. This gap refers to the ways values, ideas, and norms are incorporated in soft power mechanisms. Research is only at the beginning of understanding the role of knowledge in soft power mechanisms in the context of tackling the climate crisis. Lastly, a more detailed picture of *consequences and outcomes* of knowledge-based soft power mechanisms than the one available today on actors (especially, non-state actors) and governance systems would enrich the existing research on soft power.

2.4. Barriers and obstacles to interactions and their outcomes

It was noted in Chapter 1 that environmental issues and, recently, climate concerns, are neutral in the eyes of the Israeli public and decision makers. Debates concerning climate policies and initiatives are not at the center of public debates, but at the same time decision makers, public officials, and civil society organizations, as well as the private sector, show a growing involvement in addressing the climate crisis. This section outlines *institutional barriers* and *ideational barriers* which can be obstacles to knowledge transfer processes and thus to climate governance. It addresses what the barriers to knowledge transfer processes and outputs in the Israeli case are and why they may hinder certain actions by certain types of actors, given that one would not expect this type of knowledge transfer to face substantial political or public confrontation.

2.4.1. Institutional / structural barriers

Institutional barriers refer to the (institutional) context of the political systems under examination. They can include the way governance functions and how problems are addressed as well as the political and economic environment. These elements influence the types and characteristics of obstacles that knowledge transfer processes and their outputs may be facing within the target / receiving country. The sender's institutional context is considered as well. Obstacles vary. For example, they can be the inability to mobilize key elite actors, weak networks (or their absence), and insufficient resources to address problems – including the inability of the organization to have designated functions to deal with knowledge transfer and implementation (Anguelovski & Carmin, 2011; Evans, 2009b; Marsden et al., 2011). The mere access to resources, as well as the capability and availability of sufficient resources to coordinate in and between governmental actors may pose an obstacle (Bulkeley, 2010). Institutional barriers are not limited to a specific level of governance. In cities, for example, more often than not, "it is the urban political economies of climate change that matter most in enabling and constraining effective action" (Bulkeley, 2010, p. 242). Moreover, knowledge transfer institutions that may ignore diffusion processes and their potentials, are influencing the further spread policy innovation (Tews, 2005).

Reflecting on the multi-level governance perspective, Haarstad (2016) stresses how a lack of interaction between governance levels blocks effective governance. Following this line of thought, transferred knowledge items that are not scaled across governance levels would likely constrain the potential for this knowledge to improve governing functions. Structural and institutional barriers may, for example, limit availability of resources and can hinder the capabilities of intermediaries to reach (shared) goals (Abbott et al., 2015b). And as orchestrated relations are expected to flourish in organizational environments that promote and encourage entrepreneurship (see section 2.2), a cultural organization that prefers, for example, routines and legalistic attitudes is likely to put up barriers to orchestrated processes (Abbott et al., 2012). In unitary states such as Israel, the "policy systems have tended to promulgate prescriptive regulations, which restrict opportunities for local innovation and fail to frame issues to include local priorities and promote social learning" (Homsy & Warner, 2015, pp. 53–54). This restriction is also found in federal systems, for example, when subnational levels may need the leadership of higher-level authority to develop innovation and initiate actions; as well as to institutionalize these initiatives and actions (Burch, 2010).

Structural barriers can also be found in political systems that are experiencing decentralization and privatization as in the case of Israel (see Chapters 1 and 4). In their research on water governance in the United Kingdom (UK), Den Uyl and Russel (2018) found that fragmentation measures, combined with austerity steps taken by the central government, have reduced the capabilities of subnational entities to address climate problems. Local authorities have gained more authority to develop and

perform climate actions than in previous times, but the resources necessary for these actions and their allocation remained in the hands of the central level. This situation created a gap between the local level's authority to act and its de facto capability, thereby leading to inaction in climate adaptation measures at the local level.

Lastly, the fragmentation that is at the heart of polycentric systems, in itself, can pose a barrier to knowledge transfer and implementation. The complexity of a fragmented system, which derives from the multiplicity of units and authorities and little or weak hierarchic control, implies these units have unclear and dispersed responsibilities. Which units and actors are responsible for what in complex, interconnected but dispersed systems? Such a system may have transaction and coordination costs (resources), especially if the number of units is big and remote from each other. The need to allocate additional resources may be a burden too difficult to address for some of these actors and units (Carlisle & Gruby, 2019).

2.4.2. Ideational barriers

Ideational barriers refer to perspectives, values, behaviors, and other elements that direct the actions and decisions of individuals and governing functions that are engaged in interactions of knowledge transfer. In general, these elements are influenced by narratives, discourses, and other knowledge framing mechanisms. In turn, these mechanisms have a great influence over the legitimization and acceptance of new ideas, on formulation of new policies, and on their implementation (Hadden, 2015).

Actors may also have cognitive barriers to receiving and accepting new knowledge. For example, actors may prefer to stick to prior, existing knowledge and beliefs of what is working and what is not working instead of gaining new knowledge and changing their beliefs. This is a mental path dependency that restricts engagements with new knowledge and information (Steinbacher, 2019). Cognitive barriers are found in the entire transfer process, from pre-decision stage to transfer to implementation. In the pre-decision stage, actors may limit themselves to certain policies or even locations (Evans, 2009b). However, this view may be simply attributed to the lack of sufficient prior knowledge (Betsill & Bulkeley, 2004).

Cognitive barriers are not detached from structural and institutional barriers. As noted above, the atmosphere where actors act could influence the penetration and implementation of new ideas. A supportive attitude at the central level to receiving new knowledge will likely put fewer obstacles to knowledge transfer before national and subnational actors (Marsden, Frick, May and Deakin 2011). Evans (2009b) finds similar ideational barriers where public opinion, elites (or other public opinion leaders / influencers), the media and constituencies may resent knowledge transfer process and its

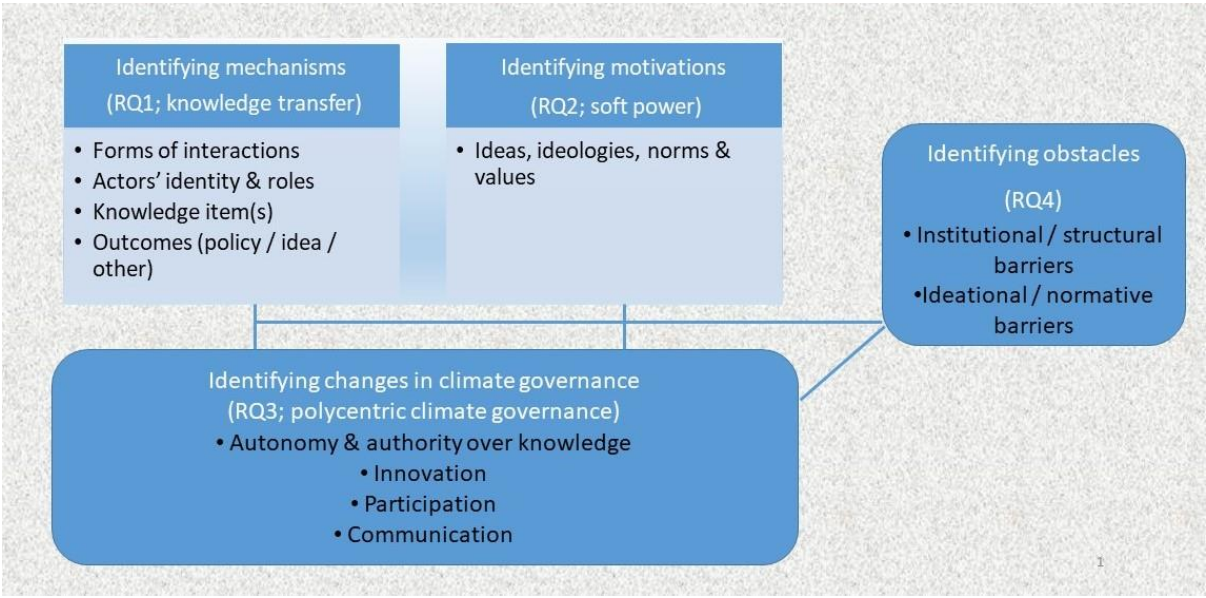
outcomes. This might deter decision makers and other actors from allocating resources for knowledge transfer initiatives (Beermann, 2017; Dolowitz & Marsh, 2000).

Competing ideas that actors face may lead to obstacles to knowledge transfer mechanisms as well. For example, diffusion may be hindered when actors are presented with more attractive models and/or (new) knowledge by other actors and organizations (Tews, 2005). This can also be detected in orchestrated relations, where the intermediary may find the orchestrator's ideas too unattractive for its own needs and goals (Abbott et al., 2015b). If the intermediary is not convinced that the orchestrator's support suffices to reach its goals, interruptions to knowledge transfer through orchestrated channels are likely to occur. In addition, while orchestration appears to rest on the assumption that more of the action - the better, conflicting or overlapping interactions may follow. For example, a regional orchestrator might focus on too many countries and duplicate its work in each of them (Chan et al., 2018), thus reducing the available support to the involved actors.

2.5. Synthesis: A framework to analyze interactions between foreign and domestic actors and the influence of these interactions on domestic climate governance

Chapter 1 stressed the possibility that foreign influence on Israeli actors likely explains, at least partly, recent advancements in actions to address the climate crisis. This possibility, however, has scarcely been addressed in research. This chapter presents analytical concepts that can be used to analyze different segments (components) of influence and its outcomes. (See Figure 3 below and Table 1 in the end of this chapter). This section integrates these concepts into a framework that analyzes the different components of EU and German foreign actor influence on Israeli climate governance. To be considered are: the *operations and outputs/outcomes*, the *underlying mechanisms (drivers)*, the *obstacles* and, finally, the translation of these components into *changes in climate governance*. Soft power addresses the drivers and motivation to interact with other countries, the knowledge transfer framework addresses the operational forms of influence and its outcomes, and polycentric climate governance provides the basis for assessing changes that (may have) occurred in the climate governance system in Israel which are derived from these mechanisms. The obstacles that were detailed in section 2.4 complement each of the three components and adds a fourth dimension that stretches throughout the process interactions, from the motivation to interact, to the ways of interactions, and then to the changes that interaction contributed to in climate governance. This framework also contributes to filling in some of the gaps and shortcomings that each analytical concept has.

Figure 3: Visual presentation of the analytical framework of this study (Source: the author).



2.5.1. Identifying changes in climate governance in relation to interactions between foreign and local (domestic) actors

The literature and research gaps that were presented in section 2.1 allow an identification of changes in climate governance according to elements of polycentric systems. These changes serve as operational elements (factors) to assess the aftermath of the operations (activities) and the outcomes of interactions between foreign (German and EU) actors and local (domestic; Israeli) actors. Together, these elements indicate the changes exogenous channels of influence can bring to governance systems. The elements / factors are:

- Enhanced and dispersed **autonomy**: This element refers to whether and how subnational and non-state actors initiate, develop, or take part in climate initiatives free from, or parallel to, the central level.
- Newly evolved, or enhanced existing types, of **participation**: This element refers to whether and how interactions provide actors with opportunities, forms (ways of action), and forums / platforms to address the climate crisis. These forms may be new to the (Israeli) setting, but they may also be already established forums that were altered by interactions with German actors and/or the EU.
- Opportunities for **Innovation**: This element refers to new forms of knowledge, learning and experimentation that interactions with foreign actors provide to recipient (Israeli) actors. These opportunities may develop or strengthen actors' autonomy and authority to address a problem or a challenge, as well as the actors' agency function.

- New or improved forms of **communication:** This refers to ways of processing and disseminating knowledge and gains from interactions between the actors in the domestic (Israeli) setting. In reference to polycentric systems, communication may involve formal and informal means of sharing knowledge and information, trust (unlike formal and/or hierarchic, top-down approach), and agreeing on new "rules" to address common climate concerns in the domestic (Israeli) setting.

These points are summarized as a first guiding question for analysis:

C*an changes that emerge out of interactions between Israeli actors and Germany and the EU be detected in climate governance in Israel?*

2.5.2. Identifying the ways interactions work and their outcomes through knowledge transfer framework

Policy transfer and orchestration *complement* each other. Previous research affirms correlations between orchestration and forms of policy transfer and learning processes (Gordon & Johnson, 2017). This section integrates policy transfer and orchestration into a *knowledge transfer* framework that serves to analyze each type of interaction between foreign and domestic actors. Integrating and applying the two concepts together provides a more thorough and multi-perspective look at knowledge transfer mechanisms between countries (and with the EU), and the outcomes these mechanisms have or contribute toward. The following section synthesizes key elements from these concepts to align them together into an operational framework.

First, policy transfer is suitable to understand direct forms of influence that transfer knowledge from one point to another. Even the spectrum of influence in policy transfer - from coercive to voluntary participation, which may reveal hidden aspects and underline forces in the transfer process - addresses a simple structure of knowledge transfer. Orchestration, on the other hand, addresses more complex forms of knowledge transfer than simple policy transfer, and it entails indirect *and* direct forms of knowledge transfer. Addressing interactions through direct and indirect forms of knowledge transfer can therefore add to understanding different aspects of the interactions.

Second, orchestration is concerned with actors pushing other actors to do or to reach something. It is steering others to act in a certain way. Policy transfer includes a "push" element as well, such as in the motivations of certain actors to export their knowledge elsewhere. At the same time, policy transfer has a "pull" element, for example when actors that aim to gain knowledge and implement it pull other actors to form policy transfer relations. The push and pull elements correlate with the voluntary and rational engagements that the actors are assumed to have in policy transfer and orchestration. However, policy transfer also suggests the potential situation where actors may be forced to participate in transfer. Using these two frameworks together thereby provides a better

understanding of who pushes what and toward whom, and why? And vice versa: who pulls what from whom, and why?

Third, orchestration and policy transfer share similar links regarding *soft mechanisms* of power. Orchestration is based on the power of persuasion and attractiveness of ideas and the identity of the orchestrator or the intermediary. In policy transfer, gaining new knowledge has much to do with the attractiveness of the source of knowledge, and the potential of this knowledge to address a policy problem. Attractiveness does not necessarily mean there are successful cases to learn from. On the contrary, learning from bad experiences may have better gains for the receiver side (Dolowitz & Marsh, 2000).

Fourth, both frameworks are dealing with transferring of a knowledge "item" (or several items). As noted above in section 2.2, knowledge items range from goals and ideas to programs and technologies, and even negative lessons (Beermann, 2017; Dolowitz & Marsh, 2000; Stead, 2012). The knowledge item can also point to the type of support that interactions bring (or intend to bring) to actors, such as material and/or ideational support from the senders to the receivers (Abbott et al., 2012). The ideational support and legitimacy that orchestrators and intermediaries can transfer to the next link in the orchestration chain integrate with items such as ideas, norms and goals that can also be found in policy transfer. In a similar way, the material support given by orchestrators to intermediaries to reach common goals integrates well with certain types of knowledge items found in policy transfer, such as technologies and programs that are intended to address a certain goal.

Fifth, policy transfer and orchestration are actor-centered approaches. The broad array of potential actors in both analytical concepts also indicate the different governance levels where interactions occur. The variations in the type of actors point to the variety of interests and potential powerplays that are part of the interactions as well. Each analytical concept (policy transfer or orchestration) provides different conditions and guidelines for identifying the *role* an actor has in a particular relationship, his or her *motivation* to engage in this relationship**,** as well as any *outcomes* that can be expected to emerge out of the interactions. The roles, motivations, and outcomes are reflected in the push and pull elements, and in the direct and indirect types of relationships that were noted above. Lastly, identifying and examining the role and functions of actors involved in orchestrated and policy-transfer relationships suggest not only who is engaged in knowledge production, knowledge transfer, and implementation but also hint at who is not involved. Identifying the actors that are absent from these interactions of knowledge transfer can provides an indication of the dominancy of some actors over others; how certain actors control, steer, and set the ideational and operational directions of transnational interactions; and the powerplays that shape governance arrangements. (See also in Howlett et al., 2017; and Shefer, 2019.)

Sixth, both policy transfer and orchestration entail an *agency function*. Agency relates to ways that actors influence and mobilize others. An actor with an agency function is purposefully steering the decisions of others. At the same time, agency shapes and is shaped by "institutions, norms of participation, decision-making processes, and what is sometimes referred to as the 'political opportunity structure'" (Newell et al., 2012, p. 369). Orchestrators enable agency as they equip or qualify intermediaries to mobilize targets, and the latter may become an agency on their own that can have an impact in bigger or in other decision-making circles. In a similar vein, policy transfer entails agency functions when actors change their actions or serve as agents of change in their own domains following the (transferred) knowledge they gained. Agency reflects on the push and pull elements that were noted above; actors pushing or pulling other actors to engage in relationships and to initiate or enhance moves to address climate change.

Lastly, both policy transfer and orchestration aim to bring a change to a given (governance) system. Policy transfer emphasizes implementation of transferred knowledge, which might mean amendments to an existing policy or the development of a new policy. Orchestration, however, involves a higher degree of abstraction. Outcomes of orchestrated relations primarily aim at reaching the goals of the orchestrator and the intermediary, but reaching these goals is supposed to have larger effects on the target domain. The end goals in orchestration intertwine with those of policy transfer. Outcomes may refer to developing, enabling, or introducing some sort of novelty regarding the target audience. Even the transfer process itself can be regarded as an innovative step for actors in some cases (Stone 2012). Building or enabling trust among recipients is considered central in both policy transfer (Marsden et al., 2011; Wolman & Page, 2002) and orchestration, and is also a key concept in polycentric governance.

Four elements (factors) can identify and be used to analyze knowledge transfer mechanisms and their outcomes. They are:

- The **form** (ways) of interaction: Is the interaction direct (e.g., bilateral)? Or is the interaction indirect, meaning it depends on several actors and linkages between them?
- The **identity and role** of actors: Who are the actors involved in the interaction? What roles do they play (e.g., steerers, initiators, leaders, followers)? Why do they act in the way they do? How do they act? How do they pursue their interests? What are the power dynamics between different types of actors? How is agency expressed?
- The **knowledge item**: what is being transferred? Is it an idea? A policy? A support of some kind?
- The **outcomes**: what came out of the interaction – a new policy or idea?

The advantage of addressing knowledge transfer through these four elements instead of using only a single analytical concept (i.e., using only either policy transfer or orchestration) is that it provides a broader, in-depth perspective on the interactions that this study examines. This more comprehensive perspective adds greater nuance to the picture of transnational and multi-actor interactions. It can illustrate the mechanisms of interactions in a setting where several types of actors from several governance levels and from different jurisdictions interact with each other. Synthesizing policy transfer and orchestration into four *operational elements* allows for different types of interactions within one political setting to be examined in depth, leading to the question:

How do knowledge transfer mechanisms between Germany and the EU and Israel take place, and what are their outcomes?

2.5.3. Identifying motivations that drive actors to interact with other actors

Research of soft power and the gaps it has suggest that foreign actors (senders) such as Germany and the EU are likely to use soft mechanism of influence to pursue their interests and goals regarding the climate crisis in target countries. These interests embed values, norms, and ideas as to how to address the climate crisis. In some cases, the senders may recruit other actors to reach their goal. It is likely that the target audience (recipients / receivers) is comprised with a broad array of actors other than state actors alone; for example, ENGOs and subnational actors. The actor-oriented approach in soft power that this study adopts correlates with the focus of knowledge transfer on agents, and with the motivation of actors to engage in knowledge transfer (Evans, 2009b). Moreover, soft power also complements polycentric governance in that the former has limitations in analyzing outcomes, and the latter is limited in understanding the effect of powerplays on polycentric systems.

It can be assumed that soft mechanisms of influence that Germany and the EU pursue toward Israel entail ideology and perception as to how to address the climate crisis; these perceptions and ideologies direct the ways of interactions. The following questions emerges:

What lies behind the ways German and the EU are influencing Israeli actors?

Table 1: Analytical framework and research questions (Table by the author)

Components of interactions	Analytical concepts	Identifying the following:	Guiding question	Embedded research question (RQ)
Governance change & developments	Polycentric climate governance	Autonomy & authority (knowledge); Innovation; Participation; Communication	Can we identify these changes in Israel's climate governance following interactions with GR and the EU?	**Sub-RQ3:** How is exogenous influence expressed in governance terms?
Mechanisms of interactions	Knowledge transfer (policy transfer & orchestration)	Forms of interactions; Actors' identity & roles; Knowledge item(s); Outcomes	How do mechanisms of influence work between Germany and the EU and Israel?	**Sub RQ1:** How do mechanisms of exogenous influence work?
Motivations	Soft power	Ideas, ideologies, norms & values	Why do GR and the EU work this way?	**Sub-RQ2:** What is motivating exogenous influence?
Obstacles and problems	Poly. Gov + knowledge transfer + soft power	Institutions / structures; Ideas & values	What barriers GR and the EU are facing in their interactions with IL?	**Sub-RQ4:** what are the obstacles that exogenous influence is facing?

Chapter 3: Methodology

This chapter provides an overview of the methodology used in the application of the analytical concepts that were presented in the previous chapter. The methodology is divided into three parts. The first part elaborates on the research design, presenting key elements of the single case study, and how it helps to attain the goals of this study. The second part elaborates on the research methods and their link to the research goals and the research design. The third and final part provides the author's personal reflections on the research design and methods used.

3.1. Research design

The sub-section elaborates on the reasons for choosing a single case design for this study, the ways this case was chosen and a thorough explanation about the three units of analysis within this single case that comprise the three empirical chapters in this study (chapter 5-7).

3.1.1. Adopting a single case design

This research aims to understand the influence of foreign actors on the Israeli climate governance system. The study examines a set of influencing mechanisms and their impacts on segments of the Israeli political system that are acting to address the climate crisis. The mechanisms under inquiry include different types of actors that operate in different ways. This means that this study examines a complex system of interactions and their interdependencies, and the outcomes that this system produces in the domestic context where these operations are at work. Given the limited previous research concerning Israel, its climate policies, and the aspect of foreign influence in this context, and given this study's attempt to address complex, multi-type interactions taken simultaneously in the same setting (see also chapters 1 and 2), this study therefore leans toward exploratory, relevance-based research (Yin, 2009). Sometimes addressed as an 'exploratory study,' it is so characterized by virtue of the attempt it makes to find 'something interesting' through and while conducting the research (Swedberg, 2020). This approach acknowledges "causal necessity" regarding the situation at hand, "but only for the purpose of suggesting a helpful and useful way of explaining it" (Reiter, 2017, p. 143).

One potential way of conducting an inquiry of this type is through a case study (or several case studies). However, this study does not fall neatly into either single- or multiple-case study designs (A. Bennett, 2004; Yin, 2009). On the one hand, the interactions between German actors or the European Union (EU) and Israeli actors may be addressed as several distinct cases to be examined. On the other hand, the fact that the interactions are occurring within and concerning the same political sphere (the Israeli governance system), points to a potential application of the single-case approach. Put differently, as this study focuses on several types of actors in Israel and their relations with different

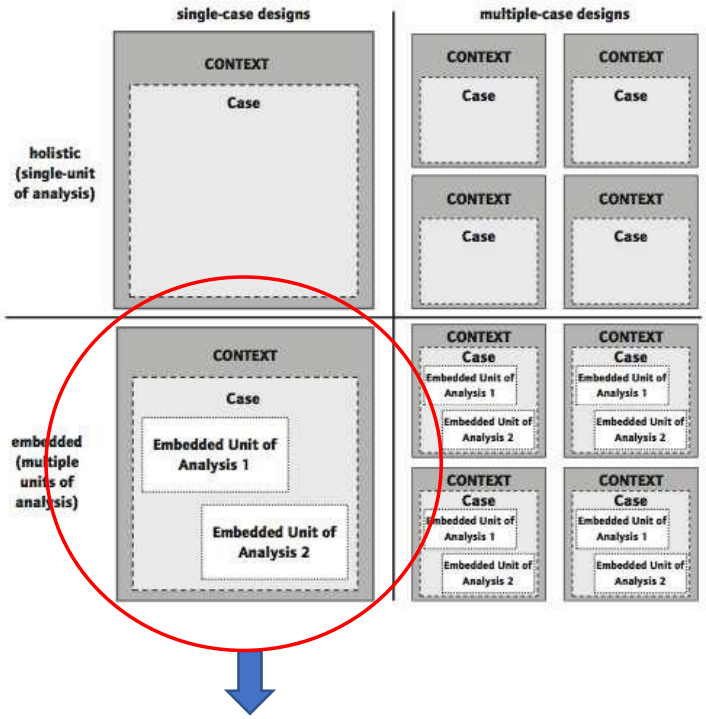
types of actors outside the country, the case design can entail either three distinct cases of governance levels (one case for each type of actors' interactions with other actors) or one single case under which several interactions are examined. Either way, these interactions represent a real phenomenon that has, as this study aims to show, political outcomes.

The complexity of interactions makes it difficult to develop equal and balanced sets of case studies. A multiple-case design would have required finding certain patterns and commonalities in each type of interaction that occurs between Germany, the EU and Israel (Pierre, 2005; Yin, 2009). However, finding commonalities in relationships that take place at different governance levels proved difficult. For example, interactions between central-level actors have different goals, aims, resources, and authority than their counterparts at the city level. Similarly, even though the operations of Germany and the EU in Israel sometimes intersect and intertwine, and even though the aims of Germany and the EU, and their practices to address the climate crisis may in fact align, comparing these entities and the ways they operate creates methodological difficulties. Germany and the EU operate on different scales, they have different political authorities and responsibilities, and their scope and actions differ. The research into this situation differs from the research into other instances of interactions and knowledge transfer mechanisms, such as types of bilateral relations (Steinbacher, 2019), or relationships that take place between subnational levels in different countries (Beermann, 2017). Instead of providing comparisons, the concluding chapter (Chapter 8) provides perspectives and insights into intersections and intertwining of the work and impacts of German actors and the EU regarding climate governance systems. Moreover, single--case studies invite criticism, for example, because of the difficulty of generalizing from one case or situation to another (Pierre, 2005). However, this problem can be answered, at least partly, by 1) providing in-depth analysis of the Israeli case with a scope that multiple cases are not likely to provide, and by 2) identifying what stands out with the case (i.e., with the Israeli case) and also by positioning it in a broader context (Wolf & Baehler, 2018).

Following this logic, this study adopts a single-case design. In this case, I examine three units of analysis (Yin, 2009, pp. 30, 32–33), with each unit representing one type of interaction / relationship between Israeli actors and German actors or the EU (Figure 3. See subsection 3.1.2 below for an elaboration of the case selection). I examine these units of analysis by applying to each type the four analytical concepts that were discussed in Chapter 2, while making necessary modifications. These analytical concepts are: the ways of interacting and their outcomes, drivers of actors, changes in governance systems, and barriers to these operations and to the outcomes. This case design corresponds to the relations between dependent and independent variables in this study, i.e., to the dependent variable "governance changes" and to the independent variables of interactions that

influence these changes. (See also in chapter 2). Following the case design suggested here, the following section provides rationales for the case selection.

Figure 3: Single case design using the embedded approach, as applied to this research (Figure by the author; Adapted from Yin, 2009 [p. 46]).



3.1.2. Case selection

This subsection strengthens the decision of this study to focus on the relations between Germany and Israel, and the EU and Israel, regarding the methodological aspect of the inquiry. Israel is an intriguing case for understanding climate governance developments. In a nutshell, Israel has numerous climate initiatives at various levels of governance, even though the country's central level has been late in adopting climate policy, and notwithstanding the country's immediate and pressing national security concerns. Moreover, Israel's strong population growth, its rapid economic development and its relative shortage of natural resources coincide with certain acute climate change impacts, such as

extreme flooding and heatwaves. Another rationale for choosing Israel as a case study is the fact of it being a relatively late adopter of policies. In the context of tackling the climate crisis, and despite its unique circumstances, Israel's tendency to learn from others' policy making positions renders the country a genuine and intriguing case to learn about knowledge transfer mechanisms and late adopters (Zehavi & Menahem, 2016), as well as leader-follower relations in the context of tackling the climate crisis. The potential of drawing on and learning from the Israeli case, despite its unique characteristics, has been noted by other scholars, for instance, by Almog-Bar (2016) regarding policy developments in the (Israeli) non-profit sector, and by Nachmany (2016) regarding climate-mitigation policy.

Germany and the EU are very important points of reference for policy making in Israeli eyes in agriculture, finance, trade, and also regarding the environment (Magen, 2012; Pallade, 2005; Pardo, 2009). The importance of these two entities for Israel remains considerable even when compared to other powerful global actors such as the United States of America (US), Russia, and, more recently, China. In the context of tackling the climate crisis, countries such as the Netherlands and Switzerland have only recently begun to advocate for climate action in Israel (Schuster, 2019). This leaves Germany and the EU as the two *main* entities that have been exercising this form of influence at least since the late 2000s. This study further examines the influence of these entities in the climate arena.

3.1.3. Case design

There are numerous collaborations between German and Israeli actors (Abelmann & Konarek, 2018; Pallade, 2005; Wasum-Rainer, 2019), and between the EU and Israeli actors (Del Sarto, 2007; Pardo, 2009, 2015). These collaborations focus inter alia on technology, industry, and education. To date, however, little theoretical and empirical research has addressed the climate, energy, and environmental dimensions of these relations. (Exceptions include, for example, Amdur, 2009, Ostrovsky, 2017 and Shefer, 2019.)

To overcome this knowledge gap, preliminary research for this study took place between November 2015 and mid-2016. The exploratory phase included online research as well as formal and informal conversations with key informants in Israel. During the exploratory phase, it became evident that Israel's strongest, most consistent, and long-lasting relations with foreign actors concerning sustainability and climate change are those it shares with Germany and the EU – more than with other allies such as the US. Most of the data collection took place between 2016 and 2019. Some data collection continued in 2021 parallel to the drafting of various chapters. This research has followed an abductive approach, meaning that theoretical directions were modified as the research progressed and new and relevant data was revealed in the course of conducting field research (Charmaz, 2006; Steinbacher, 2019; Wolf & Baehler, 2018).

Interactions were chosen based on their meeting at least two of the following criteria:

1. Interactions should focus mainly on climate change, energy, or also on the environmental dimensions of sustainability that correspond to climate change and energy, such as urban planning.
2. Efforts and, in some instances, resources put into interactions by any side are meaningful in the eyes of the Israeli partners (Abbott et al., 2012).
3. The interaction is long-term (Dolowitz, Plugaru, & Saurugger, 2019). For example, an official participating in a seminar with German representatives would not count as an interaction, let alone as a meaningful one. By contrast, a days-long visit by Israeli actors to Germany, featuring intensive exchange opportunities and meetings with German experts, would likely be considered a meaningful interaction.
4. The recipient (Israeli) partner should present meaningful involvement in the interaction (Abbott et al., 2015a; Dolowitz & Marsh, 2012).

Following these criteria, several interactions and collaborations between the EU and Israel, and also Germany and Israel, were excluded from this study. For example, the participation of one official from the (Israeli) city of Netanya in a learning excursion to the City of Berlin (Germany) in February 2016 turned out to have marginal impact in Netanya and with no long-term relations.[23] Initiatives by the EU and the German Heinrich Boell Foundation (Heinrich Böll Stiftung [HBS]) to support minorities and marginalized communities in Israel were excluded as well. This is because the focus of these initiatives was, for example, on gender equality and social (in)justice rather than on climate and the environment.[24] Projects and collaborations with Germany and/or the EU that fall under these criteria but were developed or approved after the years 2019-2020 were excluded, as well, because they were developed and initiated toward the end of the empirical phase of this study. One example is a project called Local Influence. This is an EU scheme to fund Israeli ENGOs with a sum of 680,000€ for three years. It was approved in 2021, with the purpose of enabling the Israeli ENGOs to help build capacities to tackle the climate crisis in Israeli local authorities (Ashkenazi, 2021c). Aspects of these developments are addressed in the discussion and conclusions chapter (Chapter 8).

I decided to exclude two other forms of interactions between the EU and Israel and Germany and Israel. One is a form of Epistemic Communities (Haas, 1992) that addresses the climate crisis through research and development initiatives (R&D), such as consortiums of academic and industrial

[23] Reflections from preliminary research in Israel in June 2016.
[24] See e.g. https://eeas.europa.eu/delegations/israel/47152/local-action-national-impact-strengthening-arab-civil-society-israel_en (Last accessed August 14, 2020.)

actors.[25] A second type of interaction that is excluded represents the involvement of the EU and the "cultural" branch of the German Federal government – The Goethe Institute – in *cultural or educational* projects regarding climate and sustainability in Israel.[26]

The exclusion of the abovementioned initiatives was motivated by two reasons. First, examining projects in a like manner with the other components of collaborations and interactions would have meant broadening the scope of research instead of narrowing it down. This would have demanded a further commitment of time and resources, well beyond the capacities of this author in the preparation of a single study. Second, it became apparent throughout the research period and up until the end of the data-gathering phase that the interactions oftentimes have indirect or less prominent relations and contributions to *climate governance systems*.

Lastly, other climate and *transnational* sustainability initiatives by which Israeli actors engage with foreign stakeholders were also excluded, as they were 1) formally initiated during or after 2020, 2) not conform with the conditions detailed above, or 3) found differing in their scope and aim in some respects from the study's aims and goals. Examples for these initiatives are the accession of city and non-state Israeli actors to global (environmental) networks in 2017 and 2018, such as C40 or 100 Resilient Cities.[27] At the time of writing, it was too early to estimate this engagement vis-à-vis its impacts. Similarly, the work done on behalf of the city of Ashdod in the transnational city-partnership program "Waste Wise Cities" was not included in this study as it had formally begun in 2020 (UN-HABITAT, 2021). Another example is the accession of Israel to the Organization for Economic Cooperation and Development (OECD) in 2010. Indeed, the accession stepped up environmental regulation in Israel (Magen, 2012; Tal, 2017). However, it became apparent in early phases of the study and later in formal and informal conversations with Israeli actors that, despite its importance, the accession of Israel to the OECD has only indirect impact on climate governance in Israel and, therefore, it was less relevant to the focus of the study. Some of the abovementioned projects and initiatives are addressed in the concluding chapter (Chapter 8), to situate the interactions that this study focuses on in a broader context. The remainder of this section presents the three units of analysis in the case of Israel.

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[25] For the EU, see e.g.: https://ec.europa.eu/info/research-and-innovation/strategy/international-cooperation/israel_en (Last accessed June 28, 2020); For Germany, see e.g. https://www.dfg.de/en/research_funding/programmes/international_cooperation/german_israeli_cooperation/index.html (Last accessed June 28, 2020).

[26] See e.g. https://www.goethe.de/ins/il/he/kul/fok/kuu.html (Last accessed June 28, 2020).

[27] C40 network: https://www.c40.org/press_releases/tel-aviv-yafo-joins-c40-cities-climate-leadership-group (Last accessed April 18, 2018). 100 Resilience Cities network: https://www.100resilientcities.org/cities/tel-aviv/ (Last accessed 28 June, 2020).

3.1.3.1 Unit of analysis 1: Interactions of German federal and municipal actors with Israeli actors

The German federal and subnational levels (the 16 states [*Länder*] and the municipalities) have various forms of relations with Israeli partners concerning the climate crisis. At the central/federal level, the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety, and Consumer Protection (BMUV) appears to be one of the most engaged actors among German ministries on climate and sustainability issues in the Israeli system. In 2016, the BMUV signed a Memorandum of Understanding (MoU) with the Israeli Ministry of Environmental Protection (MoEP) (Federal Government, 2016). Concerning the climate crisis, stronger federal ministries in Germany, such as the Federal Ministry of Economic Affairs and Climate Action (BMWK) and the Ministry for Digital and Transport (BMDV), seem to have weaker bilateral ties for cooperating with their Israeli partners. This trend has been changing since the late 2010s, but it remains weaker than the bilateral relations between the BMUV and the MoEP. (See more in chapter 5.)

In addition to the Israeli central level, both Berlin and the BMUV are engaged in a unique collaboration with the city of Tel Aviv-Yafo (Israel). It means that a federal German ministry and a German state (Bundesland) are interacting with a city-level actor in Israel. This instance of collaboration, which is embedded in an official agreement between these three actors and financed by the BMUV, focuses on the preservation and retrofitting of Bauhaus buildings in Tel Aviv-Yafo, with a strong emphasis on experimentation, such as with green retrofits (*Tel Aviv White City Network*, n.d.). To the best of this author's knowledge, no other German federal ministry has a relationship of this form and to this extent with subnational units in Israel.

The German embassy acts on behalf of the Federal government and the Federal Foreign Office in Israel. The Foreign Office represents Germany's official stances on the climate crisis, energy, and sustainability. The Federal Foreign Office focuses on facilitating, supporting, and coordinating interactions and activities between German and Israeli actors. Even though the BMUV has its own unit for international relations, it sometimes receives support from the embassy in Israel.

Other federal agencies such as the German Society for International Cooperation (GIZ) share with Israeli partners hardly any interactions concerning climate and sustainability.[28] Except for Berlin, the other German federal states (Länder) have but few connections with Israeli partners around issues of *climate change and sustainability*. The (German) state of Bavaria, for example, opened its own Representative Office in Israel in 2017 to strengthen the ties between the two entities.[29] However, climate concerns are only one of several issues of collaboration. While federal states provide funding

[28] The GIZ has few development-aid projects with Israeli partners in developing economies. See for example: https://www.giz.de/en/mediacenter/68264.html (Last accessed June 28, 2020).

[29] https://www.bavariaworldwide.de/en/israel/home/ (Last accessed April 23, 2022)

for city-to-city cooperation between German and Israeli cities, the states have little involvement in the content and practicalities of cooperation.

In contrast, several German municipalities enjoy city-to-city cooperation with Israeli cities over climate change, sustainability, and/or the environment. In conducting initial internet desk research and preliminary interviews, the focus was be narrowed to two main initiatives: the respective collaborations of Freiburg and Berlin with Tel Aviv-Yafo (Shefer, 2019). These two schemes for cooperation are anchored in official agreements. The preliminary research revealed two additional city-to-city cooperative efforts with German cities around sustainability and/or climate crisis issues: Herzliya's (Israel) in cooperation with Leipzig (Germany) and Kfar-Saba's (Israel) with Mülheim (Germany). Herzliya and Kfar-Saba have relatively advanced aspirations and practices for addressing the climate crisis and implementing urban sustainability measures, compared to many other Israeli cities. These initiatives for cooperation seem weaker than those that are maintained by Tel Aviv-Yafo; they also present little that corresponds to the abovementioned selection criteria. Nevertheless, I chose to incorporate them in this study because, at the time of research, few other Israeli cities, if any, were engaged in city-to-city cooperation initiatives related to climate and sustainability with German cities or with cities from other countries. These weak forms of engagement between Israeli and German cities serve as reference points for reflecting on types and forms of interactions with German actors and the EU. This is taken up in the final chapter (Chapter 8).

In sum, the first unit of analysis in this study (chapter 5) focuses on interactions between the German federal ministries (BMUV and the Foreign Office) and the three German municipalities with Israeli central and municipal levels actors. Although the focus of this unit of analysis is on the (German) *public sector*, this first case relates to the engagements of German non-state actors when they are crucial or relevant to the analysis.

3.1.3.2. Unit of analysis 2: interactions of German non-state actors with Israeli partners

The second unit of analysis focuses on interactions of German non-state actors, i.e., entities that are not part of the German public sector, with Israeli actors. Preliminary research revealed that the main actors of this type concerning issues related to the climate crisis, energy, and sustainability are the German political foundations. In the German political sphere, a political foundation serves as an 'executive branch' of political parties that have seats in the German parliament (Bundestag). However, despite close ideological and political ties between the foundations and the parties, the former are not considered public sector actors, but rather non-state actors (Abelmann & Konarek, 2018; Thunert, 2008). This study therefore views the political foundations in line with other non-state actors such as Non-Governmental Organizations (NGOs) and Non-Profit Organizations (NPOs).

Preliminary research showed that, at least until the years 2019-2020, two out of the six German political foundations that operate in Israel stand out in terms of climate action, energy, and/or sustainability: the Heinrich Boell Foundation (Heinrich Böll Stiftung [HBS]), which is affiliated with the German Green Party (*Bündnis 90/Die Grünen*), and the Konrad Adenauer Foundation (Konrad Adenauer Stiftung [KAS]), which is affiliated with the Christian Democratic Union of Germany (*Christlich Demokratische Union Deutschlands* [CDU]).[30] Among the two, the HBS was perceived by Israeli informants as the most dominant foundation in the environmental field (climate and sustainability included) in Israel. Both HBS and KAS have multiple interactions and projects with Israeli state and non-state actors. Other foundations, such as the Friedrich Ebert Foundation (Friedrich Ebert Stiftung [FES]) and the Rosa Luxemburg Foundation (Rosa Luxemburg Stiftung [RLS]), were excluded from this study as they presented fewer actions and/or less meaningful engagement in these issue-areas in Israel, at least until 2020.[31]

The non-state actors that are examined under the second unit of analysis also include several Environmental Non-Governmental Organizations (ENGO). They are the Freiburg Future Lab in the City of Freiburg, and the German Chamber of Commerce (AHK) in Israel, a private organization that represents the German business sector in Israel. These organizations were chosen because of what seems to be active and continuous engagement with Israeli actors over the climate crisis and sustainability. Other ENGOs, such as the German Green Building Council (DGNB), were excluded from the study as they showed sporadic and relatively weak connections with Israeli partners.

By and large, individuals and private corporations involved in interactions between the countries in relation to the climate crisis and sustainability were incorporated only partially into this study. Often, their engagement was marginal or else too sporadic to track down and analyze systematically. This exclusion was determined despite the gaps that exist in research considering the private sector's interest in knowledge transfer and governance formations (Holden, 2009; Newell et al., 2012). Forms of non-participation among these actors in German-Israeli interactions are addressed nevertheless in the discussion and conclusions chapter (Chapter 8). A few individuals and organizations that organize or regularly participate in German-Israeli environmental collaborations, such as private consultants, were excluded from this study because of difficulties encountered in questioning them for this research.

[30] True to summer 2021.
[31] See, for example, http://www.fes.org.il/?s=climate, http://www.macro.org.il/publications/?id=91, http://www.macro.org.il/images/upload/items/97437375092542.pdf, http://www.macro.org.il/images/upload/items/93209658120047.pdf (Last accessed December 26, 2021)

In summary, the second unit of analysis focuses mainly on the work of two German political foundations in Israel, and few other/ additional organizations and individuals. The focus of this unit is on non-state actors, but when it is relevant or necessary for the analysis, the study addresses the engagement of German public sector actors, as well.

3.1.3.3 Unit of analysis 3: The EU projects with Israeli partners

In Israel, the EU engages mainly with the central level and municipalities regarding the climate crisis, energy, and sustainability, and only partly with civil society organizations. Following the criteria for the exclusion of interactions (subsection 3.1.3), several interactions are examined.

The main engagement of the EU with the Israeli central level concerning sustainability and relating to the climate crisis are the EU Twinning projects. These projects aim to transfer European stakeholders' knowledge to non-EU target groups to bring the latter closer to EU standards of operation. In each Twinning project, European stakeholders compete in open bids. The EU then finances the operations of the winning stakeholder(s) in the target country.[32] In Israel, Twinning projects range from improving the performance of gathering and analyzing statistical data to improving the environment and communication.[33]

The first environmental Twinning (2013–2015) targeted regulation of the prevention of industrial pollution[34], and the second project (2015–2017) targeted public policy management that promotes green growth and sustainability.[35] These projects aimed to contribute to Israel's climate mitigation tactics. The third Twinning project (2019-2021) addressed waste management.[36] The main Israeli partner and coordinator in both projects was the MoEP. The first two environmental Twinning projects in Israel included German stakeholders. The implications of German stakeholders operating from within a Twinning project is further addressed in the chapter designated for the empirical research concerning EU-Israeli relations (Chapter 7), and in the final, concluding chapter (Chapter 8).

Other than Twinning projects, Israeli public sector officials from both central and local levels take part in the EU's "TAIEX" platforms, which provide European Neighborhood Policy (ENP) countries

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[32] https://ec.europa.eu/neighbourhood-enlargement/tenders/twinning_en (Last accessed June 29, 2020).

[33] https://ec.europa.eu/neighbourhood-enlargement/neighbourhood/countries/israel_en (Last accessed June 29, 2020).

[34] http://www.sviva.gov.il/English/env_topics/IndustryAndBusinessLicensing/EU-Twinning-Program/Pages/twinning-project-2013-2015.aspx (Last accessed June 29, 2020)

[35] http://www.sviva.gov.il/English/env_topics/IndustryAndBusinessLicensing/EU-Twinning-Program/Pages/Twinning-Project-2016-2018.aspx (Last accessed June 29, 2020).

[36] https://www.gov.il/en/departments/guides/twinning_2020_strengthening_sustainable_waste_management_in_israel (Last accessed September 28, 2021).

with opportunities to learn and receive training, to bring them closer to EU standards and policies.[37] However, the challenges involved with tracing participants in TAIEX and sampling their activities in the Israeli context turned out to be too complex to analyze in the framework of this research.

Parallel to the Twining projects and the TAIEX platforms, the EU engages Israeli municipalities in separate projects of different scopes; it either collaborates with a single municipality or several municipalities, in any case, in a transnational municipal project such as the SUDEP or the CES-MED.[38] Projects include water and other resource management, sustainable energy, transportation, and tech-innovation. In many cases, the EU provides financial and other resources to local corporations, organizations, and consultancies to convey the project on behalf of the Union.

Drawing on the selection criteria above (subsection 3.1.3), the following projects were selected for this study: implementing climate and energy solutions in the Israeli cities of Kfar Saba and Eilat. In the Israeli context, these two cities are joined to Tel Aviv-Yafo as forerunner cities.[39] Preliminary research revealed that in the mid-2010s, engagements of several other Israeli cities in EU networks were marginal or weak in terms of meaningful action and outcomes; therefore, these engagements were excluded from this research. For example, the City of Lod in central Israel had participated in the CES-MED project. But following or parallel to this project, at least until 2020, the city did not take additional steps toward sustainable use of resources and/or addressing the climate crisis.[40]

In sum, the third unit of analysis focuses on the EU's environmental Twinning projects with the Israeli central level, and on EU projects related to the climate crisis in two Israeli municipalities. Up until the end of the 2010s, the EU's work with Israeli civil society (ENGOs and grassroots movements) on climate and sustainability was scattered and unsystematic, which made it difficult to analyze in the scope of this study. This missing element concerning the Israeli civil society is discussed acknowledged in the respective empirical chapter (Chapter 7) and discussed in the concluding chapter (Chapter 8).

3.2. Research methods

The study adopts a qualitative research approach to examine the three abovementioned units of analysis. Qualitative analysis is useful in revealing and understanding the ways with which actors

[37] https://ec.europa.eu/neighbourhood-enlargement/tenders/taiex_en (Last accessed June 29, 2020).
[38] See e.g. https://www.ces-med.eu/project/countries/israel (Last accessed June 29, 2020).
[39] See, for example, Bulkeley (2010) and Kern et al. (2021) on different aspects of forerunner cities in the context of tackling the climate crisis.
[40] Lod is an economically and politically weak peripheral city, a position which may explain why the city did not manage to use this project to develop other climate-related projects. However, this question exceeds the scope of this study.

operate, the drivers and motivations for their actions, and the perceptions, ideas, norms, and values concerning these actions. Qualitative inquiry thus can address and further an established understanding of knowledge and related knowledge transfer mechanisms that guide actors and their actions (Birchall, 2014; Salskov-Iversen, 2006). In this study, adopting a qualitative approach is of assistance in exploring and revealing the contribution (or lack thereof) made by actors to mechanisms and settings that shape and are being shaped by climate policies and practices. Previous studies presented similar driving forces for the qualitative approach when aligning it to the analytical frameworks used for this study (Beermann, 2017; Bendlin, 2020; Chitty et al., 2016; Jordan et al., 2015; Wolman & Page, 2002). Qualitative analysis aligns well with the inductive approach common to policy transfer. Evans (2019) stresses that this reasoning stems from the "inevitable corollary of applying heuristic models of policy development" (p. 103).[41]

To enhance our understanding of actions and perceptions of actors vis-à-vis changes in governance, the qualitative analysis in this study rests on several sources of information: 1) semi-structured interviews and other forms of conversations, 2) an analysis of documents of governmental and non-governmental organizations, gray literature, online sources, and media reports, and lastly, 3) insights from the author's personal engagement in the forms of interactions that the study focuses on. The rest of this section elaborates on each type of data source, the coding and sampling techniques used in the analysis. Finally, this subsection addresses bias and insights into the shortcomings of the methodology presented here.

3.2.1 Semi-structured interviews

Semi-structured interviews are positioned between structured interviews (where all questions for interviewees are pre-determined) and free-form interviews (a conversation with no pre-determined questions) (Burnham et al., 2008). Semi-structured interviews serve the purpose of the study because they allow engaged stakeholders in German-Israeli and EU-Israeli interactions sufficient room for unplanned developments, experimentation, and revelations during the interview itself, beyond what the researcher planned or hoped to achieve in the conversation. This form of conversation allows other aspects of these relations that were unseen by the researcher to unfold. (Alsaawi, 2014; Bryman, 2008; Thew et al., 2021). This is highly useful for research much as this study, which addresses both complexities and relationships between different types of actors and across different scales, and embeds exploratory elements, as well. Moreover, interviewees are sometimes either the sole or at least the main source for detailed insights into actors' beliefs and practices which (may) have led to a

[41] At the same time, this arguments serves Evans (2019) in underscoring the need for further expanding policy transfer research to include/ encompass quantitative analyses.

certain outcome (Pautz, 2012). Semi-structured interviews require, at times, room for the author's critical reflection and interpretation (Irvine et al., 2013; Reiter, 2017). In some parts, I brought to the analysis personal impressions and reflections following the interviews conducted.

Following the preliminary research (see above in "case design"), a focused collection of data taken from interviews and conversations was made in several intervals between October 2016 and November 2020 (the majority of which were conducted between October 2016 and August 2019). Most background talks, formal and informal conversations, and interviews took place in personal encounters in Israel and in Germany, including online platforms such as Skype and Zoom. Few interviews were conducted via email and telephone. Group conversations were also conducted as part of the author's professional engagement with German-Israeli collaborations. (See below for detailed accounts of these engagements). In total, 68 interviews and formal conversations were used in the study. (10 more background talks that took place in Israel in early stages of this project were not added to this research.) Table 2 provides a summary of the interviewees and their affiliation; the Appendix at the end of this research provides more information regarding these interviews.

Table 2: A summary of interviewees and their governance affiliations (Table by the author)

	Central level	Subnational level	Civil society	Private sector	Total
Germany	8	3	5	4	20
Israel	13	11	18	3	45
The EU					3

On average, interviews lasted each between 45 and 60 minutes. With few exceptions, the interviewees received several guiding questions and short, general explanations on the research aims prior to the interview. The guiding questions were adapted to the positions held by the interviewees, and they were then modified according to the development of the research and the data that was gathered. Almost all the questions addressed the following themes: the type and form of interactions with foreign, German and/or EU partners, the actors involved, the outputs of these interactions and addressing obstacles and barriers to the interactions.

All interviewees who were included in this study belong to at least one of the following groups: 1) EU or German officials/professionals who were/are engaged in interactions with Israeli state and non-state actors concerning the climate crisis and/or sustainability; 2) Israeli officials/professionals who were/are involved in interactions with German and/or the EU concerning the climate crisis and/or

sustainability; or 3) Israeli actors who were/are engaged in climate-and sustainability-related policy making and practice.

Interviewees represent a broad range of professions and backgrounds: subnational and central level governments, the private sector, ENGOs, academia and research. The broad array of interviewees reflects the diversity of participants in interactions between Germany and Israel, and the EU and Israel at various governance levels and concerning various issue areas in the climate context, such as energy and green building (see also Marsden et al., 2011). Moreover, the broad array of interviewees enhances the possibility to better understand governance changes at several levels and the interlinkages between these changes.

To approach most interviewees, I used "snowball" sampling,[42] while for the remaining interviewees I used online searches and the media. Given the small size of the population in Israel, professional ecosystems are relatively small, and most professionals and officials know each other. This is clearly the case with climate and sustainability professionals, experts, and officials. Using the snowball approach to a professional ecosystem under study assisted me with reaching certain interviewees and winning the confidence of key figures in this ecosystem. This was particularly crucial when talking to central and local governmental officials, who generally have little time to participate in interviews. (See for example Salskov-Iversen [2006].) In addition, given that in most Israeli ENGOs the number of staff members is small, I decided to approach one key person in each organization. Only in a few instances, when it was seen as useful to the research, did I interview more than one person in an ENGO. For selecting ENGOs for this study, I chose those organizations that had a clear connection to climate and/or energy, and/or sustainability in relation to climate and energy. I chose these organizations only when, within the timeframe allotted by the research, there was sufficient data to point to their interactions with Germany and/or the EU. My search for ENGOs was completed by conducting an online search or by receiving a recommendation from other interviewees. For example, I refrained from making formal interviews with informants from one of Israel's most influential ENGOs, Adam Teva V'Din, because at the time of data collection they focused on legal advice and advocacy at the central level concerning diverse environmental issues and infrastructure and less focusing on the climate crisis. The organization seems to provide more profound advocacy for climate action than before only since 2019.[43]

[42] The term "snowball interview" refers to the manner of approaching potential interviewees with a recommendation or by referring to one or more former interviewees. This approach is useful for creating trust among interviewees and better becoming acquainted with the "pool" of people who are involved in a particular issue area.

[43] https://www.adamteva.org.il/en/climate-and-resources/climate-change/ (Last accessed September 29, 2021)

With the public sector, I took a different approach. The responsibilities on climate and energy issues stretch across different departments and sub-units in any given municipality or ministry. Therefore, I tried to approach several officials from each municipality or ministry I selected for this study. All in all, by the midway point in my research, I had decided to focus on the following ministries: MoEP, Ministry of Energy and Infrastructure, Ministry of Construction and Housing, and the Ministry of Finance (Treasury), as well as on two governmental agencies: the Electricity Authority and the Innovation Authority. Interestingly, at the time of research, it was evident that the Ministry of Transportation had little if any interactions within and/or relations to the focus of the research. I adopted a similar approach to municipalities.

The selection of interviewees also refers to several core aspects of this study, for example, who participates in interactions with Germany and the EU, and how. These aspects are addressed thoroughly in the empirical chapters and in the final chapter (discussion and conclusions).

I used a similar tactic for approaching the Israeli public sector to interview German and EU officials and stakeholders. For the German public and non-state sectors, I mainly used recommendations from Israeli partners. In some instances, especially concerning the city of Berlin, I used my personal contacts from encounters and meetings from German-Israeli collaborations, in which I took part (see below in subsection 3.2.3). Moreover, I focused on German actors that had professional contacts or relations with Israeli stakeholders in climate and/or sustainability issues. It became apparent that collaborations with Israeli actors over these issue-areas are made by a relatively small group of people, usually as part of other duties for which they are responsible.

3.2.2. Review of texts and online sources

Hard copy and online sources of information were used to complement data sources for this study. These sources can be divided into two groups. The first type incorporates data from websites, social media accounts, data sets and hard copy publications of EU, German and Israeli public sector actors. The second type of data incorporates sources from German and Israeli media (mainly editorials and news items), the websites of ENGOs and private entities' social media accounts and hard copy publications put out by these organizations over the years. All of these publications were collected throughout the research period, and as the research evolved. They are all open to the public, except for a few publications that the author received from interviewees to be used with their explicit approval, or to create impressions rather than to serve as a primary source. It is important to point out that, during the period in which data was collected for this study, only a few large, mainstream Israeli media bodies addressed the climate crisis. This situation limited my ability to rely on a broad variety of media sources. These two types of information were collected throughout using purposive sampling that identifies data sources according to their relevance for the study's focus and aims.

Using these sources of data supports and complements data derived from conversations and semi-structured interviews; said use of data also strengthens the arguments of this study concerning the interactions and their outcomes. At the same time, some of these texts reflect perceptions of actors and institutions that are engaged in interactions with Germany and/or the EU, as well as in actions on their behalf, whether intended or already completed. The complementary data support the analysis developed in this study, in that they represent the stances and positions of actors regarding the interactions they are taking part in.

3.2.3. Participation in German-Israeli collaborations concerning climate and sustainability

The last source of data draws on my own engagement in several German-Israeli initiatives between the years 2016 and 2019 concerning energy, climate change, and other "green" agendas. Some of these engagements ended up with academic and policy-oriented publications that correlate with some of the themes and interests of this study (Shefer, 2018, 2019, 2020b, 2020a). These engagements include:

- Participation in an Israeli fact-finding mission conducted in Berlin concerning energy efficiency. The mission included local and central Israeli government officials and experts from the private sector concerning green building and energy (February–March 2016).
- Participation in a research exchange program between the Institute of Advanced Sustainability Studies (IASS) in Potsdam, Germany, and the Israel Public Policy Institute (IPPI), Israel. The exchange program was supported by the HBS and included collaboration with the Israeli MoEP[44] (June–September 2019).
- Formal and informal engagements in Berlin with the German-Israeli Sustainability Network (May 2019).

Participation in these initiatives cannot be regarded as being indicative of the 'participant observation' approach (Burnham, Lutz, Grant, & Layton-Henry, 2008) for two main reasons. First, these groups were not the focus of this study. Second, the participation was not organized and planned to gain research insights. Instead, participation in these initiatives was conceived as part of the author's own professional development. As such, insights from participation add a valuable, first-hand source of information and thus experience from which to interpret certain types of learning and knowledge transfer mechanisms between Germany and Israel. In particular, these initiatives add to my understanding of the identity of the actors, to their attitudes and perceptions concerning the interactions they take part in, and also to their ways of foreseeing outcomes from their engagements. Moreover, directly engaging in these initiatives myself is something that provided me with a further

[44] https://www.ippi.org.il/fellowship/decarbonization/ (Last accessed September 30, 2021)

basis for potential reflections on the tension between what these initiatives strive for and the ways they are designed, and their real performance and outcomes. A reflection like this is not common to studies regarding knowledge transfer mechanisms and governance developments. Lastly, the engagements became useful in gaining access to potential interviewees.

3.2.4. Coding and sampling

Coding and sampling for this research took place in two main phases. Because of intervals between the data collection periods, these two phases intertwined at times. For example, I conducted one round of interviews once having already started to analyze data from the preceding period. In the first phase, I took handwritten notes during or soon after each background talk, conversation, or formal interview. In the early stages of this study, these notes were also used to expand/ further or modify the analytical frameworks and to redirect the study's focus. These notes were also cross-referenced and aligned with the second stage, in which interviews and group conversation were transcribed. Most of the interviews were transcribed using designated software. After transcribing, I added notes and reflections that correlated with the research questions and the research aims. Parallel to this, I made a manual draft of key themes as they emerged from the interviews toward developing analytical research frameworks. This eventually resulted in an iterative process that was shaped in intervals as the research progressed, and that even continued during the writing stage.

During this second phase, and drawing on Birchall (2014) and Charmaz (2006) , I created a system of themes, starting from two core themes and then progressing to other subthemes and subunits. This system was modified throughout the research phases but reached its final form in early 2020, after which minor modifications were made. This system serves two major objectives: First, it represents and reflects on the analytical frameworks and the research questions and design. Second, it indicates actors' views, perceptions, opinions, and actions dealing with knowledge transfer mechanisms and their outputs, of which these actors are part or by which they themselves are affected. The following provides a partial example:

Core theme 1: division by type of interaction

Collaborations with German public actors

- Israeli ministry (name)
    - MoEP
- Israeli city (name)
    - Characteristics of collaboration
    - Outcomes of collaboration
    - Barriers

Core themes 2: division by themes

Lagging climate action in Israel

Local level climate action in Israel

Barriers (Israel)

- Institutional & political barriers
- Ideational barriers (for policy and climate action)
- Others

What are the sources from which the Israeli local level learns?

Relations between the central & local levels in Israel

How do ministries formulate policy? From where are their ideas taken?

- Ministry (name)
- Issue-area (e.g., energy efficiency)

From where are Israeli ENGOs drawing their ideas for policy/action?

- ENGO (name)

Scaling knowledge in Israeli system(s)

Miscellaneous

With each interview, conversation, and with other sources of data, I marked parts of texts that seemed suitable for one or more themes or subthemes. In each of these (marked) parts, I highlighted specific key words and/or sentences, which presented or also challenged my interpretations and understandings, key assumptions, aims, concepts, and questions. With this approach I was able to identify commonalities, differences and recurrences in the data sources, and attribute those to the themes and subthemes (see for example Benulic et al., 2021 and Mohr, 2021.) This is what can be called "zigzagging" between the data and the literature (Thew et al., 2021). The focus of this approach is not on analyzing particular wordings, for example, to develop an understanding of narratives and discourses (Burnham et al., 2008; Feindt & Oels, 2006; Hajer & Versteeg, 2006). Based on these text excerpts and the highlighted words and phrases within them, I chose passages and direct quotations that enabled me to present the "wider themes under discussion" (Hargreaves, 2010, p. 4) concerning each type of interaction. I searched for certain patterns and links that either match or challenge the guiding question and the themes and subthemes (Benulic et al., 2021). This approach reflects the iterative, abductive nature of this study. Turns and changes that this study had undergone throughout the research period shaped the research analysis further, in an iterative process (Charmaz, 2006; Mohr, 2021; Steinbacher, 2019).

3.3. Reflections on research design and methodology

An iterative qualitative analysis may be perceived as more subjective than other forms of analysis, quantitative and qualitative alike. Subjectivity refers to the position of the researcher, the perceptions and views and prepositions he or she brings to the research. Other shortcomings may be the exclusion of Israeli, German and European actors that are engaged in interactions. These actors come from the private and academic sectors, and from higher ranks of the EU bureaucracy. I was not able to survey the full range of stakeholders that participate, or previously participated, in interactions between the three entities. Another shortcoming concerning the research design was the decision/ determination to focus on Israel. As an Israeli, I may possess biases toward Israel and its political system. These biases may also hint at a language bias and/ or barrier. My interviews with EU and German partners were conducted in English, and it may very well be that some things have been lost in translation from German or Hebrew to English. Nevertheless, I tried to address these shortcomings by 1) diversifying the range of sources of data for this study, 2) engaging personal critical and reflexive thoughts while conducting interviews and throughout the analysis process, and 3) providing a transparent and elaborated research methodology and design as much as possible, such as concrete explanations for the turn of events that shaped research directions.

Chapter 4: Background

This chapter provides background information concerning Israel, Germany, and the European Union (EU) in the contexts of this study. It thus provides a ground to better understand the subsequent empirical chapters and the closing discussion chapter of this study. The chapter elaborates mostly on Israel because, 1) this is the (governance) setting under examination, and therefore understanding how this setting works is important; and 2) the Israeli governance system and its responses to climate and energy issues receive less focus in academic research than is the case for Germany and the EU.

For the most part, the background focuses on the years since the 1990s, when climate concerns started to take root all over the world. This chapter has four parts. The first part elaborates on the Israeli political and economic systems in the context of energy and climate concerns. The second and third parts provide background on climate and energy politics and policy making in the context of tackling the climate crisis. The fourth part elaborates on the relations between Israel and the EU and Germany.

4.1. Israel

This section begins with an introduction to Israel's main environmental problems and development concerns, then it moves on to describe its political system and ends with information regarding the economic system and energy market.

4.1.1. Developmental challenges versus environmental concerns

Founded in 1948, Israel is a small country with few natural resources but with high development standards. The country is positioned on the border between North Africa and West Asia and on the Mediterranean Sea and has a sub-tropical climate (hot and dry summers, and cold and rainy winters). The unique geographical position of the country also provides several different landscapes and, subsequently, weather patterns. About 60% of Israel's land is desert, thus making space for human settlements, agriculture, and other economic activity scarce. Most of Israel's population and economy are centered in the remaining 40%, and especially along the Mediterranean coast.

Israel is one of the most overpopulated, high-density countries among the developed economies. Its high growth rates are expected to continue throughout the 21st Century (Tal, 2016a), with ana 2% annual population growth rate. The country is expected to grow from 9 million people in 2019 to more than of 15.5 million people in 2065 (Central Bureau of Statistics, 2018). The country's average annual (economic) growth rate was 3.5% prior to the global economic slowdown following the 2020 coronavirus outbreak. Even after the end of the pandemic Israel managed to retain a positive economic growth (*State of the Nation: Society, Economy and Policy in Israel 2022*, 2022). Israelis enjoy

relatively high living standards which demand high consumption of energy and water and other natural resources, more so than was the case in the early stages of the young country's development.

Resources, however, are scarce. The country is very small, only 22,000 km^2 (less than 1/20 of the size of France), which makes land one of the most contested resources in Israel. Land is competed over for residential and commercial, agriculture, infrastructure, and military training grounds and other uses. As the population grows and the economy changes, more land is being converted into residential and commercial use at the expense of agriculture and the loss of open spaces. Israel is turning into a highly urbanized country, with less than 8% of the population residing in non-urban settlements.[45] The contestation over land use also reflects on Israel's actions concerning climate change. For example, Israeli decision makers are trying to increase the use of photovoltaic (PV) energy, but this source of energy demands substantial amount of space which is competed with other needs such as housing. Likewise, Israelis depend heavily on private mobility, with about 200,000 new vehicles are added to the roads each year. Public transportation is lagging and fails to support the population in central and peripheral areas alike. By and large, mainstream planning and urban planning are still in favor of private-mobility (Tal, 2020b).

Regarding water, in the first decades of the young country large scale water infrastructure and irrigation initiatives enabled agriculture and residential use in the arid lands of the country. Water was brought from the northern part of Israel to the south. Over the years, efficiency in water and agriculture gained Israel international recognition (Tal, 2008; Vogel, 1998). In 2005, Israel began large scale desalinization projects in the Mediterranean for residential and commercial use. Today, most of Israel's water for these uses is desalinated. Desalination processes, however, have environmental and health costs. Desalinated water lacks natural minerals and desalination processes result in large quantities of brine residues and are energy-intensive (Kassirer, 2020; Tal, 2018).

Climate change is expected to affect Israel a great deal due to its position in the Mediterranean area.[46] Rainfall periods in Israel have become harsher and shorter, with rising temperatures in the winters. These changes are expressed in floods, and increased frequency of heatwaves compared to previous decades (Drori et al., 2021). Some studies predict that Israel's coastal areas will be affected by sea level rising, adding to already occurring depletion and loss of parts of the coasts (Davidovitch et al., 2014; Yaron, 2022a).

Climate change and scarcity of key resources are intertwined with developmental challenges and the high population growth trends that Israel is facing now. There are scholars that see Israel's rapid population growth as the most pressing threat to Israel's future (Carmi, 2017; Tal, 2016a). Tal

[45] https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS?locations=IL (Last accessed May 05, 2022.)
[46] https://www.ynet.co.il/environment-science/article/ryizplkef (Last accessed May 05, 2022.)

(2016) stresses that the growth rate requires a radical change in the way Israelis should live, work, and produce and consume resources. For that, radical policies are required: reducing dramatically the number of children per woman and, at the same time, preparing the infrastructure for life in a highly populated environment. These changes mean improving and changing, for example, current perceptions, priorities and methodologies of planners and policy makers, and diverting and increasing governmental investments to public transportation and efficient housing. In contrast, other scholars claim that it is Israel's over-consumption patterns that are responsible for the country's acute environmental problems, and not necessarily population growth (Brachia, 2019).

Compared to other countries, Israel's greenhouse gases (GHG) emissions are negligent because of its small population, small land area and its economy, which is based on service industries rather than heavy industries. However, these emissions are very high *per capita*, close to those of big, developed economies. If present development trends continue, emissions are expected to rise from 80.18 MtCO2e in 2015 to close to 100 MtCO2e by 2030, with electricity production and transportation contribute the biggest share of emissions (53% and 21%, respectively) (OECD, 2020). The Organization for Economic, Cooperation and Development (OECD) recommends Israel to focus on three key sectors in mitigating climate change: sustainable production of electricity, more efficient and compact planning and housing, and decarbonizing the transportation sector (OECD, 2020).

4.1.2. The Israeli governance system

Until 1948, the territory of the present State of Israel was governed by Great Britain and, before that, by the Ottoman empire. In World War I (WWI), Great Britain defeated the Ottoman empire and, together with France, took hold of large parts of the Middle East. (The two divided their territories in the famous Sykes-Picot Agreement.) In 1920, Great Britain received from the League of Nations (the international body the preceded the United Nations [UN]) the mandate to rule what is known as Mandatory Palestine. The British kept some of the former Ottoman legal system and added to it elements of British law. The British developed infrastructure for heavy industry, road and railway systems, ports, and communication lines.

In the years after the establishment of the State of Israel, the Israeli legal system evolved as a mix of Ottoman, Anglo-Saxon, Common (European) and religious laws.[47] In parallel, the Israeli establishment, led by the former Democratic Socialist Political Party (MAPAI), adopted, and grounded the centralized, top-down governance system that was used by the former British rulers.[48]

[47] These apply mainly in Family Law concerning each of the main religions in the country: Judaism, Islam, and Christianity.

[48] Israel does not have a constitution. The Israeli judicial system and, especially, the Supreme Court, are responsible for several substantial turns in Israeli legal and political systems. These judicial turns are addressed briefly in this study.

The dominancy of the central government in Israel is reflected in its parliamentary system. Elected governments in Israel are formed by a coalition, and the central government enjoys a lot of power in passing laws and regulations. The opposition is considered weak, and since the 2010s it is getting weaker (Friedberg, 2019). The judicial system is considered independent but has been getting weaker relative to the central government. Governmental bureaucrats are, in general, non-politicized and are comprised of professional staff (Mahler, 2004), and technocratic in nature (Ginosar, 2021).

The Israeli local (subnational) level and the private and non-governmental sectors are considered politically weak as well. The central government manages Israel's 255 local authorities through administrative districts ("Mechozot") under the Ministry of Interior. Local authorities (cities/municipalities and small rural communities) are dependent in many respects on the central government's decisions and budgets, and this system has implications on the authority and legitimacy of the Israeli local level; for example, in land-use planning, infrastructure and addressing environmental problems. However, the local level went through several reforms over the years, in which more authority was handed over to them. The local level has much authority in waste management and local level planning but much less, for example, in energy production and consumption (Prados et al., 2022; Ronen & Kimhi, 2022; Shefer, 2020b). A parliamentary proposal from 2022 aims to establish a third governance level between the central and the local levels, allocating more authorities and responsibilities to local levels (Arlosoroff, 2020). However, these reforms did not make a substantial change in the local level's autonomy from the central government. In fact, the central level became politically stronger during the 2010s in areas such as planning in order for example, to allow for quicker building of a large number of residential units (Feitelson, 2018). The general elections of November 2022, which gave power to Israel's most right-wing and nationalistic government to date, raised concerns that efforts to weaken the power of local authorities against the central government will continue (*Israel Cities End Strike, Turn to Courts to Block Government's Tax Plan*, 2023).

Privatization and decentralization brought the public sector to allocate responsibilities and services to local level and, especially, to non-governmental sectors. Non-for-Profit and Non-Governmental Organizations (NPOs and NGOs, respectively) are now responsible for many previous governmental functions and services such as in education, welfare, data management and consulting. What has emerged since the 1980s is a system in which local authorities have authority and freedom to act in a variety of services and functions, but they are losing authority in some areas to the central level. Local and central level actors are collaborating more than ever before with non-state actors to develop and implement policies. Budgetary decisions remain mainly at the hand of the central level.

The hierarchical mode of governance that characterizes the central government also prevails at the Israeli local level. Elected local officials are weak compared to elected mayors, who hold the real – and sometimes only – power at the municipal level (Dror & Zehavi, 2020; Mahler, 2004). The city or regional council engineer or architect, the treasurer, and the chief executive officer (CEO) are very important functions at the Israeli local level. This situation provides top-level officials at the local authority much power in decision-making processes and the allocation of resources. Israeli municipalities are supported by two main associations: Forum 15, which unites Israel's 15 (economic) independent cities (over the years three more cities joined the association), and the Federation of Local Authorities in Israel (Masham), which unites all local authorities in the country.

Lastly, in parallel to these changes, since the 2010s there has been a slow but gradual tendency in governmental ministries and agencies to adopt a more participatory approach in early decision-making processes. NPOs and NGOs are invited to take part in early stages of policy making in order to improve the quality and legitimacy of policies, reduce frictions and prevent potential objections by non-state actors to policies in advanced stage of formation and during implementation (Dunetz, 2020). The inclusive approach also starts to take place at the local level.

Often, public debates in Israel revolve around security. The military and other security agencies receive a large bulk of the governmental budget, and these agencies also enjoy a high sense of legitimacy in the eyes of the public. (More accurately put, these agencies receive high legitimacy ratings from the Jewish part of the population.) Other concerns occupy public debates as well, including high commodities prices, poverty and the religious tensions which are intertwined with security concerns, such as the tension between the Jewish and Arab populations in Israel. While these debates have changed in their nuances over the years, they retain their center position in public debates (Mahler 2004, p. 173).

In contrast, and with a few exceptions, debates over "environmental" problems and climate change, and debates over resource management (other than water) have been marginalized in the country (Orenstein et al., 2012). The big majority of the Israeli public has shown little interest in acute issues linked to the climate crisis such as producing electricity from renewable sources and applying energy efficiency measures (Michaels & Parag, 2016) and overpopulation (Tal, 2016a). Unlike in many European countries, the Israeli public favors "fossil economy", in the view that dependency on the country's natural gas resources is the backbone of the welfare of the country (Fritz & Koch, 2019; Teschner & Paavola, 2013). Israelis ranked between low to average in their beliefs on the existence of climate change, its causes and consequences, and their personal concerns about it compared to many European countries (Poortinga et al., 2019). Likewise, even when Israeli teachers showed concerns and awareness to the climate crisis, most of them did not act or *knew* how to act (Seroussi et al.,

2019). Having relatively low regulatory and economic incentives to shift to more sustainable patterns of production and consumption, the Israeli private sector has been also slow to adopt more climate friendly practices (Alterman, 2015; Bahgat, 2014). In other words, climate change and its consequences are not high on the public agenda in the country. This lack of interest stands in contrast to Israelis' long-standing and high awareness of nature and water conservation (Orenstein et al., 2012).

4.1.3. Economy and energy

In 2019, Israel had high annual economic growth rates compared to many other developed economies. Even the global recession that followed the 2020 COVID-19 crisis did not harm these growth rates. In its early days, Israel had a planned, centralized economy, which was centered on agriculture and traditional industries. In the 1980s Israel shifted towards a market-based economy and today it is dominated by neo-liberal approaches (Maron & Shalev, 2017). Israel's main economic sectors are hi-tech, agriculture, security and military, tourism, and services. Israel is known for its innovation and vibrant research and development (R&D) community. The share of cleantech and climate-friendly tech-solutions is still small compared to other foci in the hi-tech industry (Harel et al., 2017), but this share is increasingly growing (Israel Innovation Authority, n.d.).

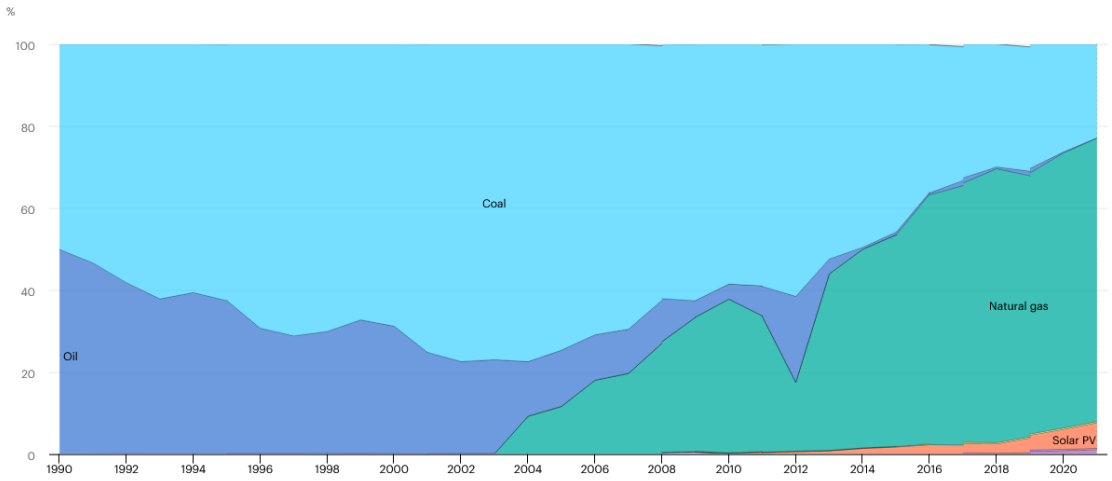
The Israeli energy market is, in general, centralized. The main producer of electricity is the Israel Electricity Company (IEC), a governmental body which is responsible for producing and providing electricity to consumers. The electricity market has gradually been privatized under neoliberal influences. As of 2020, the control (management) of the supply of electricity is in the hands of a separate governmental body called Noga. In the early 2010s, electricity production began to be put into private hands. In 2020, about 40% of Israel's electricity was produced by private corporations; this tendency is expected to strengthen. Renewable energy is made by private corporations, although the central government is involved in several relevant research and development (R&D) projects in this field. In the past Israel relied mainly on coal to produce electricity, but today it relies mostly on natural gas retrieved from Israel's economic waters (Figure 4). (See also Chapter 1.)

Plans and proposals to decentralize further the Israeli energy market were raised by state and non-state actors alike. Environmental NGOs (ENGOs) have advocated decentralized energy production in the country since the early 2010s (Dolev et al., 2013). Recently, initiatives such as NZO Israel led by a prominent Israeli ENGO, Heschel Sustainability Center (Heschel) introduced the feasibility for, inter alia, community energy in Israel and flexible forms of energy production and consumption.[49] In parallel fashion, in the late 2010s the central government removed regulatory barriers for local authorities

[49] See https://heschel.org.il/en/policy/renewable-energy-nzo/ (Last accessed May 06, 2022).

and households to encourage these sectors to install renewable energy, especially photovoltaic [PV] energy.[50]

Figure 4: Israel's electricity supply by source 1991-2021 (Source: International Energy Agency [IEA])



In 2016 Israel planned to produce 10% of its electricity from renewable sources by 2020. However, in 2020, Israel produced only 5.7% of its electricity from renewable energy, and consumed 6.9% of the total electricity from renewable sources -- mainly from PVs (RIC, 2021). Two year later, in 2022, the country managed to come close to the 10% goal, with 9.5% renewable energy from the total energy production of that year (Ashkenazi, 2023; Wolfson, 2023).

It was stressed earlier that Israel is going through an energy transition from coal-based energy production to natural gas-based energy. Natural gas reserves were firstly discovered in Israel's economic waters in the late 1990s. The discoveries turned Israel from a country that was highly dependent on energy imports to a small energy "regional power" which can produce and export energy resources on its own. The gas discoveries were also framed as a national security issue, resulting in almost automatic support from the public and mainstream media for gas extraction (Teschner & Paavola, 2013). The utilization of natural gas did, however, face opposition from a small group of activists. The early 2010s saw heated debates over the cost of natural gas in Israel and the plans to export gas to foreign markets. The ways the central government negotiated and approved the contracts with gas producing companies drew criticism as being too costly for Israeli consumers and for having limited public benefits in the long run. For example, critics claimed that the revenue mechanisms from natural gas that the Israeli government adopted (the Israeli Citizen's Fund) favored the immediate profits of the gas producing companies over the common good of the Israeli public. This claim was proved right when, in 2021, very limited revenues were collected by the fund and gas

[50] See https://www.gov.il/he/departments/news/re_090222 (Last accessed May 06, 2022).

prices remained high compared to other countries that produce and use natural gas out of their own territories (Paz-Sawicki, 2021).

The central government used the shift from coal to natural gas as a means to reduce the country's GHG emissions. Natural gas is less carbon intensive than coal, and thus, electricity or thermal power produced with gas produces fewer emissions. Yet critics argued that relying mainly on natural gas given the current developmental trends of Israel means, that there will be de facto, little in the way of actual GHG emissions reductions. It was only in the late 2010s that calls to grow the share of renewable energy in the Israeli energy mix increased and gained momentum in public debates. The criticisms and claims made against Israeli policy decisions tied to natural gas use came almost entirely from a few ENGOs, academics and media bodies[51]. Local authorities and the private sector seem to be entirely absent from debates over natural gas use and, thus, remain passive players in this debate.

4.2. Germany

In contrast to the Israeli system, the German federal system enables more autonomy to subnational units to advance and develop policies and climate actions. At the same time, the German system needs to comply also with EU norms and regulations at federal, state (Land) and local levels. German actors, therefore, need to navigate between different levels of governance to pursue their interests and to achieve climate goals.

Being Europe's largest economy and the fourth largest economy in the world, Germany's industry has great political power in the German realm. Despite globalization and dissemination of production lines abroad, Germany maintains corporatism, i.e., collaboration between the government, the private sector and, to some extent, workers' unions (Dryzek, 2013). For many years, German politics were considered overly bureaucratic and with a tendency to cast out certain groups and ideas that challenged the dominancy of moderate right and left political parties (Beck, 2004). Like in many other countries in the world, traditional political dichotomies of right and left are weakening in Germany, and populist ideas are on the rise (Dilling, 2018; Dostal, 2017).

Germany has a long tradition of addressing environmental problems. The country adopted nature preservation regulations and advanced waste management systems in the 1970s and 1980s, and policies to reduce GHG emissions starting in the 1990s. In the 2000s, the German model of Feed-In-Tariff (FIT) to incentivize the market to adopt renewable energy was diffused to and adopted by other countries in the world (Busch & Jörgens, 2005), Israel included (Ahituv, 2012). For decades, Germany's approach to solving environmental problems was through ecological modernization (EM)

[51] One mainstream newspaper, The Marker, was a harsh critic of the natural gas deals from its early stages. The rest of the critic came from non-mainstream bloggers, journalists and citizens.

(Mol, 1999; Schreurs, 2020). This approach addresses environmental problems in technocratic and technological lenses, i.e., finding technological solutions to the problems while trying to maintain (high) development patterns. Beginning in the 1990s, climate change problems were framed as EM issues. According to Beck (2004), in these years Germany used climate change to position itself as a forerunner in international climate negotiations. Being a forerunner was an opportunity to strengthen Germany's international position and, on the other hand, drive its industry to be more competitive in the global economy. In other words, Germany was one of the first countries in the world that saw climate change as an opportunity to improve its global position with benefits for its economy, in a way that served its corporatist system and ecological modernization approach.

The degree of commitment to reducing GHG emissions varied depending on the ruling coalition but, in general, the country has set ambitious goals. The Climate Change Act, which passed in 2019 and was amended in 2021, set the following targets: cutting GHG emissions by 65% (compared to 1990 levels) by 2030 (instead of 55% previously), reaching a minimum of 88% emissions cut (compared to 1990 levels) by 2040 and reaching climate neutrality by 2045 (instead of the previous target year of 2050).[52] The Climate Change Act states annual targets to reduce emissions by sector until 2030, under EU emissions reduction plans.

These large transformations in the economy and social habits are addressed under Germany's energy transition or in German, *Energiewende* (See Chapters 1 and 2.) The Energiewende aims at shifting Germany's economy away from its dependency on fossil fuels toward an economy that is based on renewable, innovative, and decentralized energy systems. The Energiewende is rooted in Germany's 1970s anti-nuclear movement and the movement's achievements in challenging the mainstream (positive) view on nuclear energy. The movement received backwind from exogenous events such as the 1973 global oil crisis, the 1986 nuclear disaster in Chernobyl and the rising interest in global warming and climate change in the late 1980s (Hake et al., 2015; Morris & Pehnt, 2016). The processes that led to the Energiewende continued further in the 1990s, with the large-scale integration of renewable energies. The Red-Green coalition that ruled Germany between 1998 and 2005 (a coalition formed by the Socialist Party [SPD] and the leading conservative party, the Christian Democratic Union [CDU]) institutionalized Germany's turn towards energy efficiency, renewable energies and the phasing out of nuclear power through innovative legislation and market-mechanisms such as feed-in-tariffs and decentralizing grids (Hake et al., 2015). Subsequent coalitions that were led by the CDU after 2005 strengthened this shift and the country's commitment to leading regional and global efforts to tackle the climate crisis.

[52] https://www.bundesregierung.de/breg-de/themen/klimaschutz/climate-change-act-2021-1936846 (Last accessed May 29, 2023.)

The Energiewende is not only a technological change but also a substantive political, economic and social change (Gawel et al., 2014; Moss et al., 2015). The Energiewende promotes production and consumption of energy by individuals, communities, and other associations in a decentralized system making use of market-based mechanisms. The Energiewende presents a change in perception and habits of energy consumption and production, of ownership, of profit-making, and of certain lifestyles that have dominated Germany since the end of World War II (WWII) (Morris & Pehnt, 2016). It is, perhaps, the biggest infrastructural project in Germany since the reconstruction of the economy after WWII.[53] To realize the transformation, Germany aims to increase, inter alia, the share of renewable energy (already in late 2010s, Germany's share of renewable energy in the energy mix exceeded 40%), investments in innovation and clean technologies, electric mobility, resource efficiency and the use of hydrogen fuel (Schreurs, 2020).

Given the fact that Germany is among the countries with a leading role in the European and global economies and politics, the Energiewende has implications beyond Germany alone. Quitzow et al. (2016) claim that the Energiewende has global significance in, firstly, showing the feasibility, the economic benefits, and the positive elements of a low-carbon energy transition. Another global significance is incorporating the Energiewende in Germany's international cooperation and relationships with other countries and societies. With its experience in energy transition, Germany can increase its influence in other countries (R. Quitzow et al., 2016).

4.3. The EU

The EU has positioned itself over the years as a global environmental leader. Many of the Union's countries and, especially, North European countries (Germany included) were implementing policies to reduce the burden of waste management and air pollution as early as the 1970s (Dryzek, 2013). Sustainable development became one of the nine guiding ethical pillars of the EU. The other pillars are: sustainable peace, social freedom, consensual democracy, associative human rights, supranational rule of law, inclusive equality, social solidarity and good governance (Manners, 2008). The Union grounds these elements in member states through directives and regulation.

The EU perceives itself as a global leader in addressing environmental problems and tackling the climate crisis. This position was criticized and contested by studies that showed how economic growth and reaching a competitive position in trade relations override environmental and social concerns that the EU advocates for within and outside the Union's borders (Afionis & Stringer, 2012). Similarly, Nielsen (2013) claims that the EU has not been able to lead meaningful actions in international and global forums such as the 2009 Conference of the Parties to the Framework

[53] A remark made by a German governmental official in a conversation with the author.

Convention on Climate Change, also known as COP 19, which was held in Copenhagen. In contrast, others have shown how EU climate leadership was built through competing powers, including member states, ENGOs and EU institutions such as the European Parliament. These powerplays enabled EU climate leadership before, throughout and after the 2015 Paris Agreement (Tobin & Schmidt, 2020).

The EU intends to become climate neutral by 2050. In 2019, the EU presented its most recent commitment to address this goal: The European Green Deal. This strategic plan is backed by allocating resources such as the Transition Fund with 100 billion euros to assist economic sectors in the transition toward low-carbon and sustainable operations. These steps have helped the EU achieve a more advanced stage of climate action compared to other developed economies, and put it in a good position to reach its climate goals (Lederer, 2020). The EU's Green Deal explicitly stresses the need to invest more resources in exporting knowledge and engaging more in cooperative initiatives as a mean to reach the Union's goals (European Commission, 2019).

4.4. Israel's relations with Germany and the EU

Israel has been depending on foreign allies and external support since its foundation in 1948. Israel's allies over the years provided it with military aid and markets for export and import of natural resources and other commodities. Until the early 1960s, Israel's main ally was France and, partly, the Soviet Block, but toward the mid-1960s the country turned more and more to other western countries and, especially the United States of America (the US). The relations with the US grew into a strategic partnership, and the US supported Israel in international forums and with military and security aid, as well as trade agreements. Other strong allies in the international arena are Germany and, to some extent, the EU. In the 2010s, Israel also managed to establish warm relations with emerging powers such as China and India, and since the late 2010s with many Arab countries such as United Arab Emirates (UAE) and Morocco, known as the Abraham Accords. In recent years Israel solidified its position as a global hi- and smart- technologies hotspot. Clean technology (cleantech) is also gaining momentum, yet much less than technologies related to security and health. Smart technologies are now at the heart of almost every trade partnership with the above-mentioned countries and the EU, cleantech included (Harel et al., 2017).

Israel and the (then) Federal Republic of Germany (West Germany, 1949-1990) formalized their bilateral and diplomatic relations in 1955, seven years after the establishment of the State of Israel. Because of the Holocaust, many people in the Israeli public and the government were reluctant to have any sort of relationship with Germany in the early days of the state. However, the Israeli central government made a decision that forming bilateral relations would benefit the young state. Forming diplomatic relationships served the intrinsic interests of each side. Israel received financial

and military aid coupled with strong political support of Israel in European and international forums. The German support evolved into a strong partnership that continues through to the present day. The strengths of these ties are reflected repeatedly in formal and governmental forums ("German President Steinmeier to Visit Israel under New Government," 2021; Pallade, 2005).

Germany is Israel's third biggest trade partner after the US and the EU. In 2020, bilateral trade was estimated in approximately 6.5 billion USD: Israel imported German goods worth of 4.6 billion USD, and exported to Germany goods worth of about 1.6 billion USD. Israel imports industrial commodities, medical products and chemicals from Germany (Israel Ministry of Economy and Industry, 2021). In recent years, innovation and smart solutions have come to be perceived as future paths of collaboration and trade.[54] According to NGOs, Germany is the second largest exporter of military equipment to Israel after the US (70% and 24%, respectively), and Germany is also importing military equipment from Israel.[55]

At the local level, more than 100 twin cities agreements between Israeli and German local authorities have been signed. These platforms serve, mostly, for culture, sport, and educational purposes such as youth exchange and school visits. However, these collaborations tend to have little to do with climate and other environmental concerns.

In the background of the bilateral relationship between Israel and Germany stands the history of Nazi Germany and the Holocaust. Many of the youth and cultural exchange programs between the countries are aimed directly to strengthen these ties despite and because of that history, i.e., tightening the ties and understanding between the people in the two countries so history will not repeat itself. The shadow of history is present in many respects in cultural, educational, political, and economic relations. Interestingly, the 2010s saw a wave of immigration of Israelis to Germany, most of them settled in Germany's capital, Berlin.[56]

The EU and Israel also have "special relations" of a different form (du Plessix, 2011). Much like with Germany, the EU-Israel bilateral relationship is based on strong economic and cultural ties. Israel is considered a partner almost equal to other European countries that are not Union members, like Norway and Switzerland. The EU is Israel's biggest trade partner of goods. In 2020, trade of goods was with 31 billion Euro, with Israel importing about 34% of its goods from the Union and exporting about

[54] https://www.gov.il/he/departments/news/expanding-trade-between-israel-and-germany (Last accessed May 09, 2022.)

[55] https://caat.org.uk/data/countries/israel/israels-arms-suppliers/ (Last accessed May 09, 2022.) The German and Israeli media gave special attention to a specific deal worth of billions of USD over naval equipment supply to Israel, which came under a criminal investigation of the Israeli police in 2017. The police suspects that Israeli prime minister Benjamin Netanyahu and other high-level officials and mediators in the country were involved in a bribery scheme with the German corporation ThyssenKrupp. As of 2023 the investigation awaits a judicial procedure in Israel (Mascolo et al., 2021).

[56] See more on this phenomenon in Yair, 2015.

21% of its own goods to the Union (European Commission, n.d.-a). Israeli universities, research institutes and governmental bodies have launched multiple research and development (R&D) projects with the Union since 1996. Since 2014, Israel has participated in the Union's leading research and innovation programs, the Horizon programs (European Commission, n.d.-b).

However, in parallel to the strong economic ties between the EU and Israel, the two entities have many political disagreements. Unlike Germany, which continuously supports Israel in international forums and in EU politics in parallel to the German support of the Palestinian Authority, the Union is traditionally a strong critic of the Israeli policy toward the Israeli-Palestinian conflict (Persson, 2018). While EU member states vary in their extent of political support for the different sides in the conflict, the EU's official position is often sympathetic to the Palestinian side, and the EU supports the Palestinian Authority financially on a regular basis (du Plessix, 2011). The EU is also one of the main providers of financial support to Israeli and Arab-Israeli NGOs and NPOs that advocate for human rights, democratic values and peace between Israel and the Palestinian Authority. The EU is increasingly a subject of criticism from Israeli right-wing political parties and non-state actors because of this support. Right-wing actors claim that by providing such support, the EU undermines elected officials in Israel and undermines the will of the majority in Israel that does not seek a compromise with the Palestinians and is increasingly less concerned with liberal and democratic values. (See, for example, NGO Monitor, 2019.)

Israel-EU relations have therefore two sides. On the one hand the parties are highly divided over political issues, but on the other hand the parties are increasing their collaborations on scientific and economic issues that serve the parties' interests. This situation is shown in, for example, the tailor-made action plan for Israel in the European Neighborhood Policy (ENP) (EU, 2007; Pardo, 2009). This plan fits the needs of all sides all the while that it maintains Israel's special position in European eyes: a developed country with appealing economic sectors and innovation potential, but one operating within a complex political situation to which the EU and its member states are divided in their views.

Chapter 5: Interactions between the German public sector and Israeli actors

This chapter examines the interactions concerning the climate crisis, between German actors operating at the federal and local (municipal) levels and different types of Israeli actors. The German public sector includes the following: the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV), and the Federal Foreign Affairs Office (AA). Other federal ministries, such as the Federal Ministry for Economic Affairs and Climate Protection (BMWK) and the Federal Ministry for Digital and Transport, are addressed indirectly (see also chapter 3). At the local level, this chapter provides insights into three city-to-city collaborations: between both Berlin and Freiburg and Tel Aviv-Yafo (Israel) (addressed also previously in Shefer, 2019 and, 2020), Leipzig (Germany) and Herzliya (Israel), and Mülheim (Germany) and Kfar Saba (Israel). The last two present weaker types of collaboration than the first. The chapter is divided into three main parts: part one addresses the collaborations at the federal level, the second part addresses the collaborations at the local level, and the third part summarizes the findings according to changes in climate governance (elaborated in chapter 2).

5.1. The German Federal Level

This section provides empirical data concerning the interactions of the German federal level with Israeli actors concerning the climate crisis. The section begins with an examination of the mechanisms that characterize these interactions and their outputs in the Israeli sphere (subsections 5.1.1 – 5.1.4). The section continues with an examination of the underlying motivations of the federal actors to interact with Israeli actors (subsection 5.1.5), and it ends with an examination of key barriers to these interactions by both German federal and Israeli actors (subsection 5.1.6).

5.1.1. Mechanisms of knowledge transfer

In the climate arena, two federal ministries stand out in their interactions with Israeli stakeholders: the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV),[57] and the Foreign Office.

Until the 2021 federal elections, the BMUV was responsible for Germany's climate actions and policies. Energy and renewable energy were, however, in the hands of the Federal Ministry of Economic Affairs and Energy (BMWi). After the 2021 elections, climate concerns shifted to this

[57] The authority over consumer protection was added to the ministry after the 2021 elections.

ministry, making it the Federal Ministry for Economic Affairs and Climate Action (BMWK). The energy transition (Energiewende) in Germany takes place in large part under the authority and control of the BMWK (see also chapter 4). The BMUV has a designated unit that is responsible for its relations with other countries, including relations that are maintained through the European Union (EU) projects (see chapter 7 concerning the Twinning projects in Israel). The Federal Foreign Office is responsible for Germany's climate diplomacy abroad, for example, in exporting the policies and practices tied to the Energiewende. The Foreign Office is operating in other countries mainly through the German embassies abroad.

Data collected for this research shows that in the Israeli context, the BMUV is working mainly with the Israeli Ministry of Environmental Protection (MoEP), and much less with other Israeli ministries. The BMUV appears to interact very little with Israeli local level entities, ENGOs and other ministries in its operations, with one exception: a collaboration with the city of Tel Aviv-Yafo (see below). By contrast, the Federal Foreign Office also works with non-state and local-level Israeli actors.

Other federal ministries have their own collaborations with Israeli ministries, for example, the BMWK with the Israeli Ministry of Energy and Infrastructure. To date, these collaborations are either at an initial state of development or focused on small-scale research projects (Federal Ministry for Economic Affairs and Energy, 2015; Ministry of Energy and Infrastructure, 2022; Wilhem, 2014).

5.1.2 The Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)

5.1.2.1 Ways of collaboration

The BMUV and the MoEP, are known to have very strong relationships. This was noted by several interviewees from both Israel and Germany (Interviews 1 and 25). The presence of Germany is felt in the MoEP not only through bilateral relations, but also through their work within the EU scheme – the Twinning projects (see chapter 7). The warm relations are maintained at the highest level, i.e., between the ministers and the top ministries' professional management (Interview 26). The ministries have "excellent relations" and constant "exchange of knowledge" at high official levels between the two ministries. (Personal communication at the BMUV.)

According to MoEP officials, the ministry's international relations unit has the closest connections with the BMUV, while in other units, connections are sporadic and less structured (Interview 25). This strong connection seems to be rooted in key units that address the climate crisis, such as the Energy and Climate Change Division.[58] But connections nevertheless trickle horizontally over to other units that are relevant to the office's climate response, such as the Green Building

[58] Personal observation by the author in knowledge exchange platforms between Israel and Germany. See also attributes to Germany by Mr. Gil Proactor in https://shakuf.co.il/8742 (Last accessed December 17, 2021).

Department. By and large, visits by the BMUV "raise the potential for collaboration and knowledge exchange" in certain knowledge items (ibid).

These relations continue regardless of the political leadership at the MoEP and the BMUV, and despite frequent changes in Israeli governments and at environmental ministries. Importantly, the relations between the ministries are not affected by the political identity and political position of the minister.

The BMUV's relations with the MoEP are formally anchored in official agreements. The German and Israeli governments have reapproved their overall collaborations in 2016 in an official Memorandum of Understanding (MoU). The MoU pins down bilateral collaborations between the ministries of the two countries, including the BMUV and the MoEP. The MoU also indicates the main points of interests in these relations regarding climate and energy, namely, renewable energy and smart (tech) solutions for sustainability-related problems (Federal Government, 2016). The two Ministries had already highlighted in 2014 the need to address climate concerns in the form of green building, mitigation, and adaptation, and shifting to a green economy. The formal agreement from that year emphasizes the exchange of knowledge, experts, joint research activities and regional collaborations to reach these goals.[59]

Detached from the bilateral formal relationships, there is also an indirect and less structured form of knowledge transfer that involves officials from both the BMUV and the MoEP. These officials participate in professional excursions to Germany, and in seminars and forums that introduce German experiences in sustainability and climate policy and practice to Israel. These excursions and delegations include, in many cases, a mix of Israeli public officials from the central and local levels, as well as people from the private and non-governmental sectors. Often, these tours are titled "Learning from the German experience" (Interview 26). For example, the office of the German Business Association in Tel Aviv-Yafo (AHK Israel) organized a tour for Israeli professionals and public officials on energy efficiency in Germany in early 2016 (personal engagement and observation of the author); and the Heinrich Böll Stiftung (HBS) supported several excursions to Germany on various themes such as green building and urban sustainability throughout the 2010s.[60] These types of interactions are addressed more thoroughly in chapter 6.

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59 https://www.gov.il/BlobFolder/generalpage/not_for_publication_bilateral_agreements/he/international_relations_bilateral_agreements_Germany-DeclarationOfIntent-2014.pdf (Last accessed December 17, 2021).

60 Preparation documents for a tour by the HBS. The documents were sent to the author by email in 2016 and 2017.

5.1.2.2 Outputs of bilateral collaborations

Formal bilateral delegations are, in principle, used as a declaration of intent. They are aiming mainly to mark the willingness of the parties to collaborate, and they signal to the market and other stakeholders what areas are likely to be on the table in terms of policies and investments. These types of delegations and declarations are often preceded by preparations and discussions at lower political and professional levels in the ministries to facilitate reaching mutual agreement over the course of action. However, there are generally limited (concrete) impacts from the declarations and the agreements. What bilateral relations contribute to most is the *legitimization* of the topics in focus, and of a framework under which learning and exchange can take place (Interviews 26 and 31). The MoEP uses the German partnership to leverage its own agenda and to substantiate arguments over the feasibility and necessity of advancing climate goals and policies (remarks from interviews, e.g., 18, 28, 33 and 41).

There is a notable "general influence" of the BMUV on MoEP policies (Interview 26). But it seems that more support is needed before concrete action can be taken. A good example is the formulation of the draft of the Israeli Climate Law, which was published in April 2021 (Ministry of Environmental Protection, 2021). The MoEP prepared the draft in collaboration with the Israel Public Policy Institute (IPPI) and the HBS,[61] and with a prominent Israeli ENGO called Adam Teva V'Din (infospot, 2021). One of the MoEP officials that was involved in drafting the law was Gil Proaktor (Head of the Energy and Climate Change Division at the MoEP), which often points to the German experiences in energy transition and with low-carbon policies when discussing similar steps in Israel. (More on these networks in chapter 6.)

5.1.2.3 BMUV bilateral relations with the Israeli local level (unique case)

A unique collaboration started in 2015 between the German federal government and the city of Tel Aviv-Yafo (Israel). It revolved around the preservation and green retrofitting of Bauhaus buildings in Tel Aviv-Yafo's White City, which was certified as a World Heritage Site by the United Nations Educational, Scientific and Cultural Organization (UNESCO). The BMUV signed an agreement with Tel Aviv-Yafo to support related research and cultural activities, and it funded the project with 2.5 million Euro until 2025 (BMUV, 2015). (In the meantime, due to coalition changes in the federal government, the project is now under the responsibility of the Federal Ministry of Interior and Community, the BMI.) The White City project is centered at the Liebling House in the middle of Tel Aviv-Yafo, and it is run by Tel Aviv-Yafo officials. The unique aspect of this project is the bilateral relations that were formed between a federal ministry and a city in Israel, with little to no relations to the Israeli central

[61] The HBS directly supports the IPPI. The author was engaged in a research program organized by the IPPI and the HBS in 2019 and is one of the Institute's visiting research fellows.

level. On the ground, the project contributes to an exchange of knowledge and to joint research by Israeli and German teams concerning green retrofitting and preservation. The Center also serves as a hub for municipal culture, which in part provides a place to introduce different aspects of sustainability to the public. This collaboration and its implications for urban climate governance were previously addressed by the author (in Shefer, 2019a). According to (Shefer, 2019), knowledge transfer between Tel Aviv-Yafo and its German partners, including the BMUV, were limited in terms of the engagement of Israeli actors that took part in collaborations, and these collaborations did not lead to substantial changes in (urban) climate governance in the city. Instead, the collaborations with Germany contributed to grounding specific concerns such as green retrofitting in the municipality and strengthening the need and ability to address climate change by the municipality (inspiration). In addition, knowledge transfer was noted as having the potential to be disseminated to other Israeli cities and the Israeli central level due to Tel Aviv-Yafo's leading position in urban sustainability in Israel.

5.1.3 The Federal Ministry of Foreign Affairs

5.1.3.1 Ways of collaboration in Israel

In principle, the work of the Foreign Office in Israel is similar to its work in other countries. The Foreign Office employs several tools to pursue its climate diplomacy goals. One main tool is the Berlin Energy Transition Dialogue, a yearly professional gathering in Berlin for officials and professionals from other countries to mingle. Other tools include, for example, a traveling exhibition about the German Energiewende. (In Israel, the exhibition took place at Tel Aviv University in 2017.) In addition, the Foreign Office supports bilateral partnerships between German and Israeli ministries, such as the BMUV and the MoEP, and the BMWK and the Israeli Ministry of Energy and Infrastructure or the Ministry of Economy and Industry.

Within the Foreign Office, there is a division of responsibilities between the political and "practical" spheres. The political sphere has a strategic view: it develops "scenarios and political pillars to reduce GHG emissions and reach ambitious climate policy at national, regional and international levels" (Interview 61). This approach is not aimed at engaging in specific projects or in a specific country, but rather to translate to other countries the German *approach and perspectives* concerning the need to address the climate crisis. The "practical" sphere is responsible for translating the German (climate) experience into practice in foreign jurisdictions. This is done, in many cases, in collaboration with other relevant federal ministries such as the BMUV and the BMWK. The BMWK is especially consolidated for projects around renewable energy (ibid).

In what seems to be a case opposite to the form of work undertaken by the BMUV, the Foreign Office works with German business associations and federations such as the German Renewable Energy Federation (BEE) to pursue its approach to climate and energy. However, the Foreign Office is

working less with German cities and states (Länder) for its operations abroad. Yet, it is involved in EU projects dealing with energy transition in European cities (Interview 63).

In promoting the German energy transition overseas, the Foreign Office adapts the narratives it uses to the domestic political and social situations in the target countries, i.e., the Energiewende is framed differently depending on the target country. In developing economies, the Energiewende is portrayed as benefitting from the reduction of air pollution (all the while reducing greenhouse gases [GHG] emissions). In countries with strong fossil fuel interests and lobbying, the Energiewende is presented as aiding national security, for example, by reducing the (domestic) market dependency on imported gas and oil. In other countries, such as the United States of America (US), the focus is placed on the potential of the energy transition to create new jobs. In some cases, the Foreign Office might choose to focus on technicalities of the Energiewende and thereby promote long-term benefits from an energy transition. The office maintains "tech-neutrality"; it does not promote a particular technology over others, as would be the case were it to focus, for example, on promoting electric vehicles (e-vehicles) over other types of (sustainable) mobility technology (Interview 63).

In the Israeli case, the Foreign Office officially adopts a careful approach that does not undermine the Israeli status quo regarding the country's use of natural gas as noted by, inter alia, Teschner and Paavola (2013). As previous chapters noted, Israeli decision makers view natural gas as an abundant and reliable source of energy that can secure Israel's energy demands and can even be exported abroad to Europe and to other Mediterranean countries. Some advocates of the use of natural gas in Israel claim that this source of energy is crucial for reducing GHG emissions in the mid- and long-term, amid Israel's transition to more low-carbon practices (Ashkenazi, 2021b). According to the Foreign Office, shifting the Israeli market to natural gas is a positive step toward reducing GHG emissions and, at the same time, a potential step toward shifting to a hydrogen-based economy in the long-run (Interview 63). This approach of the Foreign Office aligns with the EU's interest in enhancing regional cooperation in the eastern Mediterranean region through joint natural gas ventures (Wolfrum, 2019).

The Foreign Office allocates approximately 3.5 million Euro per embassy for its Climate Fund. The Climate Fund is aimed at "soft" climate actions in each country such as lectures, seminars, and cultural events. According to a high-level official at the Foreign Office, these projects are "diplomacy oriented… not technical projects… [They are] fostering dialogue and bringing people together" (Interview 61). The Foreign Office Headquarters in Berlin does not intervene in the content and operationalization of the funding support channeled through each embassy. The embassies reach out to local stakeholders, and projects simply need to fit the political priorities of the Foreign Office (ibid). Thus, officially, the only point of contact of the Foreign Office with another country's stakeholders

concerning climate diplomacy is the embassy in that country – barring bilateral (governmental) relations between the two countries.

Unlike the work of the embassies, the Headquarter in Berlin does not coordinate action with other German stakeholders, such as the German political foundations, in their activities in a specific country or region. These connections take place at the embassy level in each country. When a demand or request is issued, the Headquarters in Berlin operates and collaborates with relevant stakeholders in Germany, for example, allocating and contacting experts to go abroad (Interview 63). These actions are sometimes intertwined or undertaken in a parallel fashion to similar actions taken by other federal ministries, agencies, and non-state actors. A Foreign Office official explained that "different projects can work simultaneously, toward the same goal or the same overarching target" (Interview 61).

5.1.3.2 Outputs of the Foreign Office actions in Israel

The main project of the Foreign Office in Israel (as of 2019) is the Water Energy Nexus,[62] an initiative that meets some of the Foreign Office's key targets in climate diplomacy: national security, water management, and the climate crisis. The project is exercised with a prominent regional ENGO, EcoPeace Middle East (hereafter – EcoPeace) which advocates peacebuilding through environmental collaboration between Israel, the Palestinian Authority and Jordan. The project was initiated by EcoPeace, which teamed up with Reichman University in Israel (formerly the Interdisciplinary Center [IDC] Herzliya), and the Israeli Institute for National Security Studies (INSS), a think tank which enjoys close relations with Israeli military and governmental elites. The project was initiated in 2016, and included scientific studies, workshops for high-level officials and a set of publications (for example, Carry & Giordano, 2019). The project is tailored to the region's needs and political conditions, with a focus on climate adaptation. The project was funded by the Foreign Office through the diplomatic missions in Israel, Jordan and the Palestinian Authority.[63] The focus of the project on national security and its targeting of participation of high-level officials in creating the project reflects that Germany prefers supporting top-down action, i.e., focusing its action on decision-making levels and the trickling down of policy from above.[64] This stands in contrast, for example, to supporting grassroots- and community- level initiatives. EcoPeace enjoys the latter support from Sweden (Interview 41).

There are several outcomes of this initiative. According to EcoPeace, the policy papers and the preceding research papers contribute to putting ideas on the table: "Stakeholders have a chance to

[62] https://old.ecopeaceme.org/projects/water-energy/ (Last accessed December 17, 2021)

[63] EcoPeace is constantly lobbying the German parliament and other German political functions, including the Foreign Office (Interview 41).

[64] Implicitly, engaging with high level officials is also inherent to the work performed by the Konrad Adenauer Stiftung (KAS), which is a major partner for the Foreign Office in the Water Energy / climate-security Nexus. (See also chapter 6.)

present their opinions and expertise. In that, they are getting engaged in the development of the process itself." This inclusiveness provides "a sense of ownership to stakeholders" (Interview 41). In addition, having high-level, recognized, and non-controversial officials and professionals such as neutral stakeholders and scientists provides legitimacy and reliability to the ideas that are expressed in the paper. Thirdly, the high-level conferences that were organized as part of the project created "a space for some ideas to be shared out there on the table and discussed. There are not so many occasions and opportunities for people to meet in this region, so it is important to create this kind of safe space" (ibid).

In 2019, the Water Energy Nexus (framed under Climate-Security) received international recognition in one of the highest diplomatic settings in the world: the United Nations (UN) Security Council. That year, Germany chaired the council and it invited two of EcoPeace's top directors to an official public discussion before the Council (*EcoPeace Middle East Addresses UN Security Council,* 2019), to echo the project and its importance for addressing climate and security concerns. These steps can be directly attributed to the work of the German federal government and the Foreign Office (Interview 41).

A recent outcome underscores the development of the notion behind the project, and how ideas behind it gained legitimacy in Israel. November 2021 saw an official announcement on a planned (commercial) deal between Israel and Jordan: the former would provide purified water to the latter in exchange for renewable energy. The deal was mediated by the United Arab Emirates (UAE), and initiated by EcoPeace Middle East (Ravid, 2021). This type of large infrastructure project that links together national security issues (energy, water, and transboundary cooperation) cannot be pursued without the consent and approval of the highest governmental levels in Israel. Thus, while not explicitly acknowledged, it is quite clear that the process that EcoPeace initiated in the mid-2010s – which, as mentioned above, was tailored to fit Germany's climate diplomacy goals – has contributed to the acceptance and legitimization of linking energy, water and national security in Jordan and Israel, while advancing their own respective climate goals.

Other outputs of the Federal Foreign Office are also linked to the introducing of novel ideas and concepts to Israel, as well as to changes in patterns of participation in Israeli governance in the climate context. In 2016, the German Embassy in Israel granted part of its Climate Fund to small sets of events called "climate talks." These events were organized by one of Israel's leading ENGOs, the Heschel Sustainability Centre (hereafter – Heschel), and in collaboration with the Heinrich Böll Stiftung (HBS) (see also chapter 6). Titled "German Israeli Climate Dialogue," these events corresponded to Heschel's first direct application for federal funding which resulted in 20,000 Euro for that purpose. A high-level Heschel employee stressed that, although the organization was seeking funding from other

foreign donors and actors, they turned for Germany's support because "we knew it was minded to the topic, and that it provides funds for that purpose". Likewise, they also knew about "the German leadership in the energy field, its ambition to take the Paris Agreement seriously, and to incorporate it into the German economy […] [I]t was all known" (Interview 33).[65]

The financial and ideational support of the Foreign Office to Heschel, with the latter being a key ENGO in Israel, contributed to creating a good opportunity to push this topic into the Israeli public debate. While other ENGOs in Israel had already been addressing the climate issue some years earlier (Forum 15, the Israeli Energy Forum and EcoPeace especially), Heschel was one of the organizations with sufficient operational experience and infrastructure to be able to and to manage to disseminate notions and ideas about the climate issue within networks of Israeli peers and decision makers.

The formulation of the project received positive feedback from the embassy, and Heschel received signals that a second funding could be secured (personal communication with an Israeli ENGO employee). This indicates that the Embassy considered that the focus for the project chosen by Heschel, as well as the operation itself, met the goals for climate action in Israel as *approvingly perceived by Germany*. Nevertheless, the 2016 elections in the US, which signaled the (temporary) withdrawal of the US from climate actions, had consequently the redirection of much of Germany's climate funding to subnational levels in the US – a move that forced Heschel to seek alternative support (personal communication with an Israeli ENGO employee).

The support for Heschel by the Foreign Office (through the German Embassy) did not stop there. In the following years, the Embassy supported several initiatives for the ENGO in collaboration with the BMUV and HBS. From the will to push public participation into climate decision making processes in Israel, Heschel searched for models to learn from, with the potential for their implementation in Israel in mind. Looking into German cases, the organization came upon the "Climate Action Plan 2050,"[66] a plan to lead Germany to a low-carbon future. The plan was developed with participation processes led by the BMUV and Wuppertal Institute, one of Germany's leading environmental research institutes. Using a small grant from the German Embassy, Heschel initiated a project titled "Learning from German Experience in Multi-Stakeholder Participation" (Benstein, n.d.) but with the aim of developing its own methodologies corresponding to the Israeli context. One key methodology was bringing together key officials and professionals from the public, private and non-governmental sectors for an intensive, days long workshop. According to Heschel, the results were, surprising. The core ideas concerning participation in these climate plans "echoed to all participants.

[65] This person stressed the positive and supportive attitude of the Embassy officials in this endeavour, which helped to move the project forward.
[66] Klimaschutzplan 2050: https://www.bmu.de/themen/klimaschutz-anpassung/klimaschutz/nationale-klimapolitik/klimaschutzplan-2050 (Last accessed December 16, 2021)

People asked, 'Hey, why didn't we do it earlier?' For us, it means that there was enough readiness (for this development) among all the 30 participants from the ministries, local authorities, civil society, and the environmental movement" (Interview 33).

To add to its effect, the workshop took place just before the second Israeli Climate Convention – an annual event that has been run by Heschel since 2016 with the support of the HBS and the German Embassy. (More on the convention and its links to German stakeholders in chapter 6.) The proximity of the two events gave more weight and exposure to many new ideas concerning climate actions with a targeted audience, which also had the power to distribute and adapt it to the Israeli context (Interview 33). Admittedly, global events that took place in this period, such as the 2015 Paris Agreement, gave Israeli stakeholders a big push to start addressing the climate crisis (Interview 33; Tal, 2017). But when Israeli stakeholders encountered the German process, "they were ready to do something, yet they did not know how…. Suddenly, they see successful, ambitious processes" (Interview 33). The adaptation of the German public participation process to Israel finds expression, for example, where one observes the Chief Executive Officer (CEO) of the MoEP pushing other ministerial CEOs to develop public participation mechanisms to reduce GHG emissions in Israel (ibid).

This joint, integrated work by the Foreign Office, the BMUV, and a few non-state German stakeholders, left a mark on the work done by Heschel itself: "The German model was an inspiration for us.… Copying it is irrelevant because the political context is different [than the Israeli one], and so are the German investments in these types of processes" (Interview 33; see also in Giosue, 2019). Yet, the German experience had a large share in shifting the focus to climate action and certain aspects related to it, such as public participation – an aspect with which there had been little experience in Israel at the time (Beker, 2019). Collaborating with Germany managed to bring into this process actors from the Israeli central level and other Israeli stakeholders.

The importance of the process that Heschel played a key part in developing was deepened further in the late 2010s. Around that time, round table discussions and consultations with the public representatives (ENGOs) gained popularity among those governmental ministries that are responsible for climate action. Some interviewees (e.g., Interviews 20 and 38) stressed that Heschel is a regular participant in these processes. This development could point to the key role that Heschel has in exposing new Israeli audiences to climate initiatives and decision-making process, and in introducing innovative thinking or policies.

In contrast, however, to these participatory mechanisms, there has also been a less productive learning process by Heschel itself. The organization attempted to *copy* the integration of the German business sector into climate action, a move that also received the support of the Foreign Office's Climate Fund, and in which the HBS took part. This attempt was done under the umbrella of "Israel

2050" conference in January 2019, a big event with key figures and high-level officials from the public, private, academic and non-governmental sectors in Israel (Heschel Sustainability Center, n.d.). Heschel "identified that in Israel, the private sector is not ripe yet [for taking climate actions]. They do not lead in thinking and practice concerning the climate. We wanted to learn from Germany what the incentives and regulations were that incorporated the private sector in climate actions" (Interview 33). This was also a goal of the MoEP, which joined the initiative. However, the organization did not manage to garner interest for that among German businesses. In the end, the organization could not realize its aim of bringing the German model of integrating business into governmental climate actions, to Israel (ibid).

5.1.4 Other Federal interactions with Israeli central level actors

It is striking to see that in contrast to the strong ties between the BMUV and the MoEP, and also to the work of the Foreign Office, other Israeli ministries have fewer connections with their partners in Germany. While formal collaborations exist, for example, between the BMWK and the Israeli Ministry of Energy and Infrastructure, data showed little evidence for a similar attitude among the latter and other ministries like the one in the MoEP. These ministries have few constant or structured engagements with their partner ministries in Germany. For the climate context, the relevant ministries are the Ministry of Energy and Infrastructure, the Treasury (the Ministry of Finance), the Ministry of Construction and Housing, the Ministry of Economy and Industry, and the Israel Electricity Authority (EA). One critical ministry, the Ministry of Transportation, was hardly observed in these relationships (see chapter 3).

So while there is sufficient evidence to show that the MoEP is influenced directly by the German BMUV and other German governmental (and non-governmental) bodies, this is less the case with other Israeli ministries. However, in some other instances, key figures in these ministries that are exposed to German models of operations are highly influenced by them – an issue that is dealt more thoroughly in chapter 6.

Ministry of Energy and Infrastructure: According to a key figure in the Israeli environmental movement and former politician, "Energy efficiency was stuck for years, but the moment the UN made a plan, it became an [important] issue there". The ministry of energy was convinced because of that, and "that influence [from abroad] has an impact on decision makers" (Interview 26). This person also noted that, in a similar vein, the decision by the former Energy Minister, Yuval Steinitz, to shut down coal-fired power plants and shift them to natural gas was reached less out of pollution concerns, and more than out of regard for the 2015 Paris Accord. In fact, this move served both purposes – reducing emissions and pollution altogether.

A high-level official in the Ministry of Energy and Infrastructure – which was also a key figure in climate actions at the Israeli local level in the 2010s – stresses that acquiring knowledge from abroad depends on the project at hand in the ministry. Like many other ministry officials who were interviewed for this study, this person said that, by and large, they favor European actions as well as those of certain progressive states in the US (Interview 27). In addition, key international events and conferences, such as the COP 25 in Madrid in 2019, have had a great influence on the ministry: "The mere fact that we travelled together with [officials from the] Ministry of Environmental Protection and that the Ministry of Energy (and Infrastructure) was the head of [the] delegation" had a big impact. But in the end, this official explains, "you cannot point to one thing that pushed for 30% of a policy or an action. It is a *series of things* that push and influence" [emphasis added] (ibid).

Nevertheless, this person stressed that "Germany is one of the countries with the best plans for sustainable energies. They are in the forefront in many aspects of renewable energy." This element of leadership drives Israeli actors to learn from the German model. At the time of the conversation, this person intended to examine the coordination of local action plans by the BMUV in Germany: "This is, really, the thing that we are working on right now. We want to see how their operation works, their support system, the functions, and the tasks for staff" (Interview 27).

Lastly, the Energy Efficiency and Environment Division in the Israeli Ministry of Energy and Infrastructure have much less interest in and focus on targeted policies or countries. A main source of knowledge for the division is the international review (of policies). A high-level official at that division explains that "We do not try to invent anything. We watch where the world is going. We hope that when we read about something, it also comes with experience and results. The more experience and results you have, the easier it is to convince other ministries and, especially, the Ministry of Finance" (Interview 38). Similarly, presenting new ideas or policies that are already processed by the Organization for Economic Co-operation and Development (OECD) is useful to the unit's goals: "If I will present something that was applied only in two or three countries, I will need to present the ways it is [or can be] similar to Israel, or why it was not adopted by other countries. But if I present an OECD policy, it will be much easier to advance it further" (Interview 38). During this conversation, this person acknowledged Germany as one of the "well known" countries in terms of energy efficiency policies. External (private) Israeli consultants represent another source of knowledge for the ministry. For example, as part of their policy for planning zero-energy buildings in Israel, private consultants and professionals presented the Energy Efficiency and Environment Division with a new term: "zero ready" buildings. According to this official, "You need the engineers and the architects in Israel to tell us how feasible something will be, so we will not make the effort for nothing" (ibid).

Treasury (Ministry of Finance): The Ministry of Finance is a key component in any major governmental move. Almost every ministry's budget needs to go through the Treasury, which plans (financially) the other ministries' plans. The ministry regularly applies international comparisons in its work. According to officials in its Energy, Transportation and Infrastructure Department, there is no specific country to which they turn to learn what may work and what may not in the Israeli context. Generally, these officials say, there are a few countries which are "famous" in certain issue-areas, for example, "Germany in renewable energy and the Netherlands in natural gas" (Interview 11). Yet, it is "EU directives and West European (policy) ideas" that serve as key references when these officials come to develop policies. Here, no specific or favorite country is being sought (ibid).

Electricity Authority: The Israeli Electricity Authority (EA) is a governmental body, which, under the authority of the Ministry of Energy and Infrastructure, plans and regulates the Israeli energy market. The EA adopts a similar, "eclectic" attitude when acquiring new knowledge, as with the abovementioned ministries. When asked specifically about Germany and the EU as sources of influence, a high-level official at the EA explained that, when the need arises, they draw on a wide range of policy examples from different countries. Interestingly, the EA also learns from unsuccessful cases of policies designed to support renewable energy in Germany, Spain, and the Czech Republic: They did it "too early and too soon, before prices went down dramatically… These governments needed to pay more and forced the public to pay more" for electricity (Interview 34).

Ministry of Construction and Housing: Until the mid-2010s, the Ministry of Construction and Housing had been fixed on conservative planning approaches that did not take climate concerns or sustainability into account. This approach appears to be changing slowly but steadily, especially after one of the ministry's former CEOs participated in the UN Conference on Housing and Sustainable Urban Development (HABITAT III) that took place in Quito, Ecuador, in October 2016. A former high ranking Israeli ENGO employee explained that "The CEO got back from Quito and I identified [in him] a true change [of attitude] towards urbanism.[67] He [still] did not want to hear about our tools for sustainable planning, even although the ministry took part in developing these tools. [But] I saw a change in his attitude" (Interview 17). This shift in perception was also noted in an interview with a high-level official at the ministry itself: Despite the fact of this new focus or, at least, despite the fact that attempts to focus on urbanism had been made several years before Habitat III, it "received a big boost from the ministry after this Conference" (Interview 23).

[67] "Urbanism" means planning and policies that prioritize more sustainable forms of living in urban surroundings. This approach employs criteria such as walkability and mixed-use residential and commercial building in the same area, over the prioritization of private mobility and suburban-type neighborhoods. (See, for example, de Jong et al., 2015.)

This person also noted that following Habitat III, the CEO had stressed that the ministry lacks sufficient knowledge of urbanism and that more learning is needed in order to prepare for the future. Relating to the focus of this study, the official underlined Germany as a "good example" for green building, urban renewal, and energy efficiency – topics that were discussed in bilateral meetings between the Ministry of Construction and Housing and the BMUV in 2017 (Interview 23). However, the former seems to treat Germany as but one of several potential sources to learn from concerning urbanism, and it did not draw on specific German or EU approaches and policies. Learning from Germany was one option available to the ministry's official once a conceptual change had taken place at the CEO office, following external influence exercised by the international community (implied from Interview 23).

5.1.5. Motivations of actors to interact

The motivation for the BMUV and Foreign Office to interact with Israeli stakeholders, with the scope and scale described above, are similar, but with nuanced differences. These drivers are not always clearly stated in official statements and policies but they run like a thread through these interactions.

For Germany, climate diplomacy is based on three concerns that fall under climate and energy foci; these, in turn, represent German interests in the international arena: climate security, water (water-energy-climate nexus), and implementation of the Paris Agreement. These concerns are meant to be dealt with globally, regionally, and locally (i.e., at the national level). Combining matters related to the climate crisis and to national (and international) security is an underlying issue that accompanies Germany's climate diplomacy and, subsequently, the Foreign Office in its work with the international community (Israel included). According to Li (2016, p. 9), there is a "political consensus in Germany that climate change has an immense impact on food, water and energy security, as well as on the world economy and relations between countries." Climate change is perceived "a 'risk multiplier' to human security and human rights" (ibid); and, moreover, "Combined with other factors such as 'failing states,' it (climate change) may increase national security challenges and amplify regional and international tensions" (ibid). This approach was also raised in Interview 61. Germany was one of the first heavy-weight actors in the international arena that put forth or framed the climate crisis as a national security issue, i.e., as an issue that has implications for countries' international position, power relations, and changes in global and regional geopolitics (Li, 2016. See more in chapter 4). Germany's long-term experience with renewable energy, for example, is one advantage the country highlights in this regard. The knowhow and experience that Germany "exports" to other countries (Steinbacher, 2019) emphasizes the potential that lies in addressing these concerns, for as there is an emphasis on fostering cooperation, exercising non-military responses, and forming "groups of friends" to deal with climate security issues (Interview 69).

The Energiewende is a core area of the work of the Foreign Office. A designated department is responsible for the "diplomacy of fossil fuels and renewable energy" (Interview 69). The purpose of this department is to communicate the German energy transition as well the energy transformation within the EU to foreign audiences. For Germany, the global shift toward renewable energy brings with it the need to address changes in geopolitical debates or changing power of countries and organizations in the international arena (ibid).

A key driver for federal ministries is the centrality of the climate crisis in the policy making and discourse in Germany. A former high-level ENGO official from Israel said that Germany "really believes in how serious the (climate) problem is, and they face the need to deal with it…. At least for the people I have worked with, they perceive it as a mission and not necessarily out of (self) interest" (Interview 28). According to officials in the BMWK, the Fridays for Future movement put a lot of pressure on the federal government to enhance Germany's climate goals, just before the Federal Climate Law was to be approved in September 2019. There are also economic incentives for Germany to speed up its climate action. As part of emissions trading schemes that Germany is involved in, the country faces the risk of paying millions of Euros if it does not reduce its emissions quickly (Interview 68).

These efforts focus on transferring knowledge and information as well as mediation between groups in dispute. In implementing the Paris Agreement, these efforts include offering assistance to the BMUV in reaching "global transformations" toward sustainability and providing information to German embassies. An underlying goal is to improve "governance" at all levels of targeted foreign societies (Interview 63).

There is another driver for the work undertaken by the BMUV and the Foreign Office with Israeli partners: The "special relations" between Israel and Germany that followed the Holocaust and grew stronger over the ensuing years (Abelmann & Konarek, 2018. See also Chapter 4.) The strong ties between the countries provide solid and secured ground for collaborations. Implicitly, the strong relations also secure financing. Germany's federal government allocates large sums of money for collaborations and actions with Israel, which benefit not only the Israeli side but also the involved German partners. This generous support was extended in 2015, to mark the 50th anniversary of the diplomatic relations established between the two countries.[68] Cities, states (Länder), and federal ministries, academic institutions, and non-state actors, these all received designated budgets to mark the anniversary throughout the year. (Some of the environmental bilateral municipal collaborations that are addressed later in this chapter were organized on the basis of these sets of anniversary events). Almost all German and Israeli interviewees in this study took the availability of German

[68] https://www.auswaertiges-amt.de/en/newsroom/news/150115-israel/268256 (Last accessed December 16, 2021)

ideational or material support for Israel almost for granted, based on the shared history of the two countries.

A former high-level Israeli ENGO official claimed that the special relationships are, in fact, underlying the collaborations in response to the climate crisis. This person claims that "the climate issue became a buzz in the past decade, so it also became more central in these relationships" (Interview 31). German funding [for climate actions in Israel] was secured after a dialog concerning the climate crisis had developed between the countries. The German interventions in this field "were built on intensive and broad relationships that [had] existed already" based on the shared history (ibid).

However, a Foreign Office official claimed that the relations with Israel are very good but are not unique compared to other German allies. The special relationship exists, but it simply characterizes the Israel-Germany context (Interview 61). Interpreting this view, Germany's climate actions in Israel do not override the special relationship, but rather they are existing alongside this essential relationship. In other words, according to this person at the Foreign Office, Germany would have been operating in response to the climate crisis in a similar way regardless of the history and the special relationship that emerged after 1955 (see more in chapter 4). With another ally of Germany, relationships will rest on a different "reason." The close relations may assist Germany in conveying certain messages more easily – but this is no different than other types of strong strategic connections (Interview 31).

The third underlying motivation to collaborate with Israel is the potential for an exchange of expertise: Israeli expertise in advanced and smart technologies, in exchange for German expertise in policy and practice concerning the climate crisis or actions to reduce GHG emissions. This driver manifests itself through the bilateral relations between Germany and Israel (Federal Government, 2016; Federal Ministry for Economic Affairs and Energy, 2015. This point was also noted in conversations at the BMUV, and with Israeli governmental officials and ENGOs). Learning from the Israeli tech experience assists in meeting Germany's aims for innovation and advancements in the smart technology era (BMBF, 2018). Some of the key issues that heighten Germany's interest in the climate crisis are smart transportation technology (e-mobility), resource management solutions, and health-related technologies[69].

[69] Health technologies received substantial attention and budgeting in both Germany and Israel after the global outbreak of the COVID-19 virus in early 2020.

5.1.6. Obstacles to interactions and their outcomes

As noted in chapter 2, knowledge transfer is assumed to be facing structural and ideational barriers. The first type of barrier refers to the "systems" toward which knowledge is directed, including political resistance and organizational problems. The second type refers to individuals within the system; for example, perceptions, ideas, and values of the individual actors that operate in this system.

5.1.6.1 Germany

The German "system" poses several barriers and difficulties to exporting its knowledge abroad. One barrier is the shift in focus of environment and climate issues that occurs depending on the political situation. For example, the Foreign Office Task Force on the Environment, a long-term unit in the office that addresses international and regional environmental concerns, changes its focus of work according to in-house political changes in Germany, i.e., according to the ruling party and the appointed minister agendas. Additionally, the Foreign Office might change its agendas, but it will still need to tackle or address political parties in other countries, which might oppose, for example, aspects of renewable energy or climate action (for example, Poland, the US) (Interview 63).

Another structural problem derives from the way the Foreign Office exercises influence through funding. An Israeli ENGO official stressed that German actors tend to provide funding and approve support for projects on an annual basis; this means that Israeli actors need to re-apply every year for certain projects. This poses a risk for organizations to develop long-term projects. By contrast, other organizations such as Sweden's Development Agency (SIDA) offers EcoPeace grant with guaranteeing five-year support. Such longer periods of support allow the recipient organization more 'air to breath' for its operations, as it faces less limitation on how to spend the funding and less need to raise money for any individual project (Interview 41). According to this person, this approach makes Sweden's support more effective. This was seen also in Heschel's attempts to receive funding from the German Embassy, which were denied when the political priorities of the Foreign Office changed (see above in this chapter). Other than these considerations, the data did not suggest any other meaningful structural barrier on the German side. On the contrary, the way Germany is working is, in most cases, structured and planned. Several Israeli interviewees (e.g., Interviews 10, 18, 21, 31) pointed to this as significant for their impression of how Germany structures learning mechanisms. According to these interviewees, this form of conduct is seen also in the work of German non-state actors.

Lastly, there are very few ideational barriers on the German side. The drivers depicted above and also the mechanisms show that, in general, German actors do not encounter ideational barriers at the federal and local levels to interacting with Israeli actors. The German actors are actively pursuing interactions with Israel and, therefore, there is little to no resistance on their side.

5.1.6.2 Israel

A key structural barrier in the interactions between federal German and Israeli actors in the context of the climate crisis is the competition of imported "climate ideas" with other ideas and conceptions at the Israeli central level. It is less an issue of *ability* to enter the system than an issue of *adapting* it to the Israeli context in a way that enables advocators of this idea to *implement* it. Michaels and Tal (2015) pointed that Israel's climate concerns were lowered as a matter of political priorities in the early 2010s because they were not interlinked with Israel's security concerns and because advocates of natural gas in and outside the central government managed to prioritize this source of energy over renewable energy. As noted previously in this study, even though change has been made in the attitude of Israeli actors and, especially, of the central government toward climate concerns, continued use of natural gas is still the highest priority of the Israeli system. As this study interprets, the political atmosphere and the attending perceptions make imported knowledge concerning the climate crisis itself and solutions to meet it, such as renewable energy, difficult to publicize and utilize (see also discussions in Ruggill, 2018).

Similarly, one good, recent example of the political contestation that hinders implementation of imported exogenous ideas is the Israeli Climate Law. As mentioned above, a coalition of experts, officials, and professionals, which was strongly backed by German actors, has worked together with the MoEP during the drafting period of the Law. However, the draft faced public criticism from the Ministry of Energy and Infrastructure and the Treasury, which both announced that they prefer, de facto, to leave things as they are: without binding governmental commitments and with substantial limitations on the power of the public to force the government to take action (Ashkenazi, 2021d). While the MoEP aimed to bring Israel in line in its climate action with many progressive countries, and while it has made compromises to reach consent from the other ministries, the Climate Law did not manage to pass during that time. The power struggles between the ministries over the draft Law remained after a new government had been elected in 2021. The new government had made bold statements on Israel's climate goals and GHG emission targets, yet, even a year after the elections, the involved ministries did not manage to reach an agreement over the Climate Law draft (Sapir, 2022). The example of the Climate Law indicates the difficulties that innovative ideas and policies face when being introduced at the governmental level in Israel. This is true especially when innovative ideas come from politically weak ministries such as the MoEP. These obstacles do not represent a (political) resistance to basic ideas concerning climate change being admitted to decision-making circles, for instance, that the climate crisis needs to be addressed, or that renewable energy is important. Rather, these ideas are subject to contestation and to the established priorities in mainstream perceptions of security and the energy market.

A former Israeli high-level ENGO employee added that because bilateral relations between German and Israeli ministries take place between professionals and officials, and much less at the political level, there is no constraining influence or intended disruption from the political level in Israel, although the latter sometimes confronts the EU or Germany over political issues (especially the Israeli-Palestinian conflict). The central level in Israel does not place barriers before ENGOs and the local level seeking to engage and implement new knowledge from exogenous sources (Interview 31).

Potentially, this contestation can help to explain why other climate initiatives received little attention from the Israel government. For example, the German Foreign Office formed a "climate group" of countries and international actors when Germany headed the UN Security Council. According to a German interviewee, Israel was invited to join the forum but did not join, even though the forum would, as this person said, have likely benefitted the country (Interview 61). For Israel, the UN arena represents a forum mainly for defending its interests concerning the Arab Israeli disputes and the Israeli-Palestinian conflict (i.e., what it perceives as a national security interest). The UN is seen by Israel much less as an arena for the country to collaborate and negotiate over other pressing global and international concerns such as the climate crisis (Tal, 2007; but see, in contrast, Tal 2020a). This disregard of bilateral and international forums aimed at tackling the climate crisis was further confirmed in the words attributed to a former minister, as quoted by a key figure in the Israeli environmental movement: "In reality, you do not do with that [MoUs] anything after signing them!" (Interview 26; see discussions also in Ruggill, 2018).

Interviewees also noted an implementation barrier related to the private sector in Israel, for example, in green building initiatives. A high-level MoEP official claimed: "There is an inherent problem with the building culture in Israel, a certain professionalization that is stuck [in the same place] for years…. Environmental impacts are usually at the end of consideration [by builders], they prefer speed and profit... [and] there is also no understanding for the necessity of green building. Therefore, we see a gap between planning and implementation" (Interview 25). While professionalization is on course to being improved, the private sector tries, in most cases, to meet the minimum standards – instead of trying to innovate and lead the way (ibid).

This problem is intertwined with criticism directed at the political level, which prefers short-term goals and fast action over long-term planning and addressing future problems in Israel. Today, "political considerations prefer speed over quality of building" (Interview 25) – and that implies that the fast-track approval of building schemes introduced in Israel by the central government in the mid-2010s bypasses standard planning procedures (see related aspects in Feitelson, 2018). These demands lower building standards and harden them against the integration of green building, which requires more long-term thinking.

In contrast to this view, a former high-level ENGO figure in Israel claimed that the problem of implementation is not related to the private sector because the latter, at least in the Israeli building sector, "is not built to take chances and lead the way" in strategic social moves, and "every fundamental thing in the Israeli private sector needs the [approval of the] government" (Interview 31).

These views, although standing in contrast to one another, point nevertheless to the internal systemic barriers of the Israeli system against new ideas growing and taking root – let alone against ideas that originate in- and require adapting from- exogenous sources. They also point to the structural barriers that are intertwined with ideational barriers: Actors have difficulties accepting and digesting new or alternative ideas that come from outside the system and challenge some of the system's key assumptions.

Lastly, the daily routines of public officials and the working habits within the public sector can pose a barrier to learning. In many of the interviews (e.g., Interviews 17 and 38) and in informal conversations with professionals (e.g., Interview 3) as well as with other central government officials,[70] engaging in learning and implementation beyond the designated time for that (for example, on a learning excursion) is a difficult task. A key figure in the Israeli environmental movement and a former member of the Israeli parliament said that, in retrospect, "real collaborations are in fact limited. Most collaborations focus on bringing experts. But to make a real, joint project, having meetings that really move things forward, it is very hard, because of the distance and the daily routines" (Interview 26). This person also stressed that collaborations would probably have the potential to yield some sort of result if funding is provided by external sources, and not the Israeli stakeholders themselves. To this person, "Israel has good ideas, but no funding…. [W]e need Germany to invest here" (Interview 26). These words represent a general attitude in Israel toward the funding of climate and sustainability schemes; having the need to find funding sources as domestic actors do not allocate enough of them/ (See, for example, Cabir, 2020 and EcoPeace Middle East, n.d.).

5.2: Municipal-level interactions

This section provides empirical data concerning the interactions of the German local (municipal) level with Israeli actors in dealing with the climate crisis. The preliminary research for this study revealed that the main interactions at the city level between Germany and Israel occur between the Israeli city of Tel Aviv-Yafo and two German cities: Berlin and Freiburg. Other collaborations occurred on a smaller scale: between Leipzig (Germany) and Herzliya (Israel), and between Kfar Saba (Israel) and Mülheim (Germany). At the early stages of research, similar bilateral collaborations between Israeli and German

[70] Informal communications with Israeli participants in a learning excursion to Berlin, in February 2016.

cities toward facing the climate crisis or issues of sustainability were scarce, only in their initial stages, or they received less attention than other topics such as education and culture by their respective city's leadership. Apart from these bilateral relations, officials from the three Israeli cities as well as from other cities in Israel participate in tours and excursions in Germany that do not fall under city-to-city cooperation; these are usually the work of German and Israeli non-state actors. Chapter 6 addresses these forms of engagement. As in section 5.1, section 5.2 begins with an examination of the mechanisms that characterize interactions at the local level, and their outputs in the Israeli sphere for each bilateral cooperation (subsections 5.2.1 – 5.2.3). Subsection 5.2.4 introduces the drivers leading cities to cooperate with each other, and subsection 5.2.5 examines obstacles to these bilateral relations.

5.2.1. Tel Aviv-Yafo, Berlin, and Freiburg

5.2.1.1 Forms of cooperation

Berlin and Freiburg are among the top 10 cities in Germany, in terms of climate adaptation (Berlin) and mitigation (Freiburg) (Otto et al., 2021). The two cities differ substantially from each other in terms of their size, wealth, political position, and the developmental challenges they face. Berlin is Germany's capital and as a city of about 3.7 million inhabitants in 2021 must address climate concerns despite the fact that it has suffered for many years from the lack of a strong economic base that could support an urban transformation toward a low-carbon future (Shefer, 2020a). Freiburg, on the other hand, is one of Germany's champions in terms of climate policies. It started addressing climate problems as early as the late 1980s, and today it enjoys the reputation of being a green, innovative city on a global scale (Kern, 2019; Shefer, 2020a).

Both Freiburg and Berlin have bilateral relations with Tel Aviv-Yafo, which appear to be the most active and fruitful among the other instances of bilateral city cooperation that are addressed in this study. These collaborations and the outcomes of their urban climate governance were already examined in a previous publication by the author (Shefer, 2019). This subsection thus focuses on key elements drawn from this publication where they relate to the goals of this study.

Freiburg and Tel Aviv signed an MoU for collaboration in 2012 (City of Freiburg, 2012), and in 2015 they formally reinforced their "green" collaboration (Freiburg-Tel Aviv-Yafo, n.d.). In 2016, Tel Aviv-Yafo signed a collaboration agreement with the Berliner Energieagentur GmbH (Berlin Energy Agency [BEA]) concerning energy efficiency and renewable energy. The agreement addresses, in part, the White City project (BEA, 2017). (See also in section 5.1.) A Tel Aviv-Yafo official noted that out of the two German cities, the collaboration with Freiburg is the strongest concerning the climate crisis and sustainability (Interview 5). Importantly, collaborations between the cities focus less on technological solutions, but rather on the interface of policy, expertise, and knowledge gained.

What these agreements provide is a formal basis for constant contacts over climate-related issues. This is expressed in the exchange of delegations and officials, which take place parallel to other excursions that German and Israeli non-state actors organize (see more in chapter 6). From 2013 to 2016, for example, at least four delegations from Tel Aviv-Yafo visited Berlin and Freiburg concerning urban sustainability. This is an important point because, as noted already by Shefer (2019a), bilateral municipal cooperation is sometime incorporated within the operations of other actors in Israel and Germany, rather than serving as an "isolated," distinct form of collaboration. This situation resembles what was noted earlier about officials from the BMUV taking part in learning and collaboration schemes between Israeli and German actors. German cities tend in their collaborations to engage more with external actors, such as private actors and ENGOs, while Tel Aviv-Yafo tends to engage less with these types of actors (Shefer 2019).

5.2.1.2 Outcomes of collaboration

The main outcome that emerges from the collaboration of Tel Aviv-Yafo with Freiburg and Berlin is the exposure by a broad array of Tel Aviv-Yafo officials and other stakeholders to new approaches, ideas and policies dealing with urban responses to the climate crisis. This means that the German cities provided inspiration and, sometimes, examples serving as the basis for emulated learning. This is mainly relevant for urban planning, green building, and to some extent energy. These issue-areas inspire stakeholders to continue with progressing urban sustainability, as well as to find new solutions to address the climate crisis (Shefer, 2019). Collaborations also helped to strengthen Tel Aviv-Yafo in the pursuit of its own climate goals and efforts to gain legitimacy and maintain its top position in urban sustainability in Israel.

The cooperation did not however, lead to concrete policies to reduce GHG emissions. And it hardly led to any changes to how the city handles or collaborates with other actors. For example, the innovative micro-energy solutions and new planning approaches that were introduced and tested for new districts in Tel Aviv-Yafo (Tsur, 2017, 2019; Interview 9) were based on eclectic sets of examples from around the globe and not exclusively on German models (Interview 27). These collaborations provided "confidence to promote these issues in Tel Aviv" (ibid). In other words, these collaborations provided legitimization to extend climate-friendly ideas to the urban decision-making processes.

Interestingly, this interviewee left their position to serve in a key role regarding renewable energy and energy efficiency in the Israeli Ministry of Energy and Infrastructure and admitted that their impressions from Germany stayed with them in their new position: "The tours to Germany always gave me a backwind to go and push projects [in Tel Aviv-Yafo]. It is not only receiving information, [but] you are present on-site, you talk to people, you see the impact…. To me, at least, *it is like a fuel that drives me to move something*" [emphasis added] (Interview 27).

A tour in Berlin and Freiburg in 2014 by Tel Aviv-Yafo officials (with two more participants from academia and the Israeli Green Building Council [ILGBC]) led to a publication that summarized their impressions and conclusions from this tour (Tel Aviv-Yafo, 2016). This output is rare in the Israeli context. The collection was distributed to Israeli cities, central-level ministries and ENGOs. The importance of this output was first in it showing the potential for learning from Berlin and Freiburg for the Israeli context. Second, the collection presented what Tel Aviv-Yafo officials felt was most impressive and inspiring. To some extent, the collection also represented that the solutions and approaches in the German cities were a legitimate goal to strive for in Israel. Third, the collection contributed to an understanding of potential solutions that can be adopted in Tel Aviv-Yafo. For example, one insight from this tour was a realization of the need to develop a more inclusive approach to urban energy solutions and to enhance research and development that is incorporated, as is done in Berlin, into the city's projects (Tel Aviv-Yafo, 2016, pp. 11– 12).

Another output was Tel Aviv-Yafo's guide to green preservation that provides an initial, yet thorough insight into green retrofit policy (Millo-Steinlauf et al., 2019). This guide emulated knowledge drawn from on-site visits in Germany. The authors and professionals involved in its writing participated in knowledge transfer schemes in Berlin and/or Freiburg, as well as in joint events with German actors in Israel concerning innovative and green retrofitting (Interview 52).

Tel Aviv-Yafo did not, however, follow certain ideas that these German cities advocate. For example, the participatory approach involving ENGOs and private actors that Freiburg highlights in its operations addressing climate challenges did not enter Tel Aviv-Yafo's decision-making processes (Interview 56). Another example is the White City Center. The center coordinates and hosts municipal activities that correspond with the large segment of Bauhaus buildings in the city, and their cultural and architectural heritage (see above in section 5.1). The center serves as a platform for exchange of knowledge, research and educational and cultural events that address, in part, urban sustainability. As such, the center is a municipal platform for the engagement of different actors regarding green building, green retrofitting and sustainability, and it may signal that a change in this regard is now underway; including a change toward a more inclusive approach than previous years in decision making processes regarding urban (sustainable) development (Shefer, 2019).

5.2.2 Leipzig and Herzliya

5.2.2.1 Forms of collaboration

Herzliya is a city on the Mediterranean Sea, and a member of the Israeli Forum 15 (see chapter 4). It is a strong, wealthy city. Much like Tel Aviv-Yafo, Herzliya is facing climate challenges such as rising sea levels and winter floods. The city is not considered a pioneer in urban sustainability in Israel as compared to other cities within its geographical and socio-economic proximity, such as Ra'anana and

Kfar Saba. (For the latter, see further below in this chapter.) Nevertheless, Herzliya was acknowledged as "minded for the (sustainability) issue," as having a "good, vibrant environmental unit," and as a city that "tries to leverage its advantages" to develop urban sustainability (Interview 20). Notably, this description was not attributed to several other cities in Forum 15. According to an official at a regional branch of the MoEP, Herzliya is one of a few cities in Israel that advances green building more than many others (Interview 16). And In 2020, Herzliya was the first city in Israel to initiate, together with the Israeli ENGO Zalul, a ban on non-reusable plastic utensils in its beach area; and then made it a binding municipal law in December 2021 (Kuriel, 2018; Yonathan, 2021). This move was a result of indirect, exogenous pressure. A Zalul interviewee explained that one of the main reasons that convinced Herzliya to initiate this move was the international hype in 2019 over the need to ban non-reusable plastics (Interview 42).

The bilateral relations of Herzliya and Leipzig over climate related issues are based on their sister city agreements. According to one Leipzig official, Herzliya is the main addressee for environmental cooperation, while with other Israeli cities such as Tel Aviv-Yafo and Haifa the relations focus on culture and educational exchange. Leipzig is also in contact with NGOs, individuals, and private entities in Israel on a variety of issues. For Leipzig, a key link in these relations with Herzliya (as well as with other Israeli stakeholders) are the Jewish institutions and organizations in Leipzig (Interview 51).

By and large, Leipzig and Herzliya are collaborating over climate concerns through municipal officials and through their business communities. ENGOs and central-level actors are less involved in this process. The collaboration received a boost through the allocation of designated governmental and municipal budgets before and during the 50th anniversary celebrations of German-Israeli diplomatic relations in 2015. Leipzig took the opportunity and dedicated its municipal economic and environment fair to enhance commercial relations with the Israeli private sector (Interview 51).

One key encounter was the visit of the head of Herzliya's sustainability unit to Leipzig in 2016. The tour was initiated by this person, who added Leipzig to their professional tour abroad. A Herzliya official saw it merely as a learning excursion but Leipzig officials had planned for a visit that will lead to a formal agreement between the cities (Interview 19). A Leipzig official stressed that "we try to bring environmental issues into the core activities [of the visit]…. [T]he official from Herzliya was meant to take back core ideas of what we do here in Leipzig", they met the relevant actors and got the relevant information" (Interview 51). Although this tour addressed several issues (waste management, education for sustainability, and energy efficiency), the attention eventually turned to sustainable transportation: the bike-sharing system that was developed in Leipzig. According to a Herzliya official, it was Leipzig that pushed for presenting this system (Interview 19).

5.2.2.2 Collaboration outputs

The visit of the official from Herzliya to Leipzig did not result in concrete policy, innovation, or plans. However, it created a small coalition of officials from Leipzig and Herzliya that tried to direct Herzliya toward a more sustainable path. This was done by pre-structuring a tour by the Mayor of Herzliya to Leipzig, so that it would focus more on sustainability than on other issues. This tour took place after the visit by the official from the sustainability unit to Leipzig. According to people who were involved in these collaborations, it was understood on both ends, by Leipzig and also by Herzliya, that the Mayor of Herzliya was not interested in environmental issues at that time. To tackle this lack of interest, both parties agreed that Leipzig will invite the Mayor of Herzliya and that, in so doing, it would have the advantage of setting the agenda toward sustainability (Interview with a Herzliya official). In this way, the sustainability unit could have a backwind when trying to push for sustainability and climate-related policies and practices in the city in later stages (Interview 51). In other words, Leipzig was serving in this case as a reference point for bringing legitimacy to the aims of the sustainability unit in Herzliya. Eventually, the tour in Leipzig lead to what seems to be an *emulation* of its bike sharing project in Herzliya, while also learning from the mistakes Leipzig and Tel Aviv-Yafo had made with this project (Interview 18).

However, formalizing this type of climate-related collaboration between the cities will require another window of opportunity: It "needs to wait for the right moment. [For] an opportunity, a brilliant idea to pop up. The personal connections are there, the willingness is there, [we] just need an opportunity" (Interview 19). The potential outcome was also reinforced by Leipzig (Interview 51).

For Leipzig, cooperation also means maintaining an awareness of potential economic gains for the city. Cooperation with Herzliya meant an opportunity for the Leipzig-based corporation to penetrate new markets for its sustainable transportation solutions. A Herzliya official said that "it is obvious that this company will participate in the bid for bike-sharing in Herzliya, but it will not guarantee winning it" (Interview 19). The economic gains were also highlighted at the Leipzig Economic and Environment Fair in 2015, which focused on the Israeli high-tech scene (including cleantech solutions). The fair resulted in partnering with Herzliya's hi-tech accelerator, which is part of Leipzig's efforts to establish the tech industry in the city (Interview 51).

5.2.3 Kfar Saba and Mülheim

5.2.3.1 Forms of collaboration

Kfar Saba is a medium-size city in the center of Israel. It is also a member of Forum 15 and is a relatively wealthy city. The city's climate impacts include, inter alia, flooding and the formation of heat islands. The city is considered a pioneer in urban sustainability in Israel. As such, it needs to balance its rapid

developmental challenges with sustainability practices. The city leadership adopted a holistic view for urban planning and urban renewal. In Israel, the city was the first to establish a designated sustainability unit, and it was one of the first cities to anchor sustainability and *green* concepts in its strategic planning. Kfar Saba was also one of the first cities in Israel to implement renewable energy and green roofing in public facilities and commercial buildings (Levi, 2014) (see also recent moves to encourage the use of renewable energy by residents in Yaron, 2022b), and to initiate energy production from wastewater treatment.[71]

Since at least 2018, Kfar Saba has focused its activities to address the climate crisis on two main issue-areas: renewable energy, and e-mobility and infrastructure (Interview 44; Ashkenazi, 2021a). In 2019, the city initiated a collaboration with the French car manufacturer Renault to test charging stations for e-vehicles, to speed up the use of these vehicles in the city. In 2021, the city announced a climate plan that is integrated into the city's annual working plans as of 2022 (City of Kfar Saba, 2021). Lastly, Kfar Saba has one of the first "green neighborhoods" in Israel – a neighborhood that combines green building elements in residential buildings. Yet some critics claim that the green neighborhood in the city is more a matter of greenwashing than a real attempt to create a sustainable mode of urban living (Interview 13). According to a high-level ENGO employee, Kfar Saba "caught the right wave of combining quality of life and environment, and they put it up front. They had a vision, and this is their advantage. They also provided good example for other cities in Israel" (Interview 20).

The attempts of Kfar Saba to be innovative and a pioneer means that there is a constant need for new ideas. According to a former official at the sustainability and innovation unit, the city leadership is constantly searching for "things that happen elsewhere" in the world (Interview 10). One channel for acquiring and sharing knowledge is bilateral municipal collaboration, usually under sister a city agreement. Kfar Saba has many bilateral agreements with other cities in the world, including, for example, Delft (The Netherlands), Juangdo (China), Mülheim and Wiesbaden (Germany).

The learning mechanisms from abroad that Kfar Saba employs are stable and continuous. The knowledge sources the city draws from stretch across various countries. Importing knowledge is something that is welcomed and encouraged by the city leadership. For that, the city employs a designated official for conducting research and for seeking ideas that can be implemented in the city. However, realizing and concretizing collaborations with other cities or entities from abroad is still treated as an occasional opportunity rather than as a case of structured policy or program (Interview 10).

[71] https://www.palgey-sharon.co.il/images/PDF/matash_annual_2020.pdf (Last access June 02, 2023)

This opportunity took place in cooperation with one of Kfar Saba's sister cities – Mülheim (Germany). A delegation of high-level officials from Kar Saba, including the sustainability and innovation unit, traveled to Mülheim in 2015 as part of the 50th anniversary events commemorating the establishment of German-Israeli diplomatic relations. The title of the "environmental" part of the tour was waste management, environmental development, public space, and urban nature; climate change and sustainable energy were integrated into these themes. Focusing on these issues derived from the ICLEI Climate Convention that Kfar Saba (and the rest of Forum 15 cities) signed in 2008 (see more in chapter 6) (Interview 10). However, the visit itself did not yield a meaningful change for Kfar Saba. It was the visit by the city's engineer to Quito in 2016 that opened a *window of opportunity* for the sustainability unit to push forward and implement plans for urban sustainability more than before. Likewise, a notable visit to Barcelona by the city leadership resulted in policies and practices drawn out of the experience of the latter. The sustainability unit was, for example, highly influenced by Vancouver (Canada) in terms of green roofing. Green roofing gained interest among the city leadership but there was no concrete case to learn from in Israel, and the unit had to seek examples from abroad (ibid). In addition, both the ICLEI climate convention and the adoption of a bundle of "European methodologies" to address the convention were mentioned as the "school" where Kfar Saba gains its new knowledge about sustainability (Interview 10).[72] Interestingly, and in contrast to other cities, these tours are usually initiated by the Kfar Saba leadership, rather than by other, exogenous actors (ibid).

5.2.3.2 Outputs of collaboration

As with Herzliya, the cooperation of Kfar Saba with Mülheim and its visits to other German cities have yielded modest results in terms of concrete policies and practices targeting the climate crisis. Yet, the visits have been important for opening the door for broader, different approaches to urban climate measures, and enhanced the potential of acting to address the climate crisis in the eyes of city officials. A Kfar Saba official stressed that the visit to Mülheim "gave me an understanding and a sense of realization to [our] planning of novel waste management system, a sense of how it looks and operates" (Interview 10). Energy management in German cities, which "can use their autonomy to create systems of carrots and sticks" (ibid) had a great inspiration over this official, even though a similar approach was not feasible in the political reality in Israel at that time. Second, the visit to Germany and understanding methodologies that are used by German municipalities provided Kfar Saba an opportunity to adopt a more systematic and thorough approach to planning and implementing climate

[72] Kfar Saba has engaged in an EU project on energy efficiency in public facilities. This project is addressed in more details in chapter 7.

actions and policies. This was realized, for instance, in developing a more thorough and holistic plan for emissions reduction that plans for five years ahead instead of planning year by year. This was "a direct inspiration from Germany" (Interview 10). Third, this visit provided backwind for other novel projects in which Kfar Saba was engaged, such as the EU's energy efficiency projects (ibid). (See more details in chapter 7.)

Indirectly, Kfar Saba's collaborations with and visits in partner cities abroad have also helped to establish the city as a lighthouse for other cities in Israel. An official from the Ministry of Energy and Infrastructure and a former high-level official in Tel Aviv-Yafo, pointed to the experience gained by Kfar-Saba in sustainable energy and energy efficiency, which is highly praised by other municipalities (Interview 27). It came to the point that the city's economic corporation is being hired to advise other Israeli municipalities on these issues (ibid). As implied from interviews with Kfar Saba and EU officials, Kfar Saba gained enough knowledge and experience to establish itself further as a leading city in Israel advancing toward urban sustainability.

5.2.3. Motivations to interact

Shefer (2019) found that Berlin, Freiburg and Tel Aviv-Yafo share certain drivers for collaboration. First, all three cities are aiming to become models of urban sustainability and also, in the case of Berlin and Tel Aviv-Yafo, global cities. However, the emphasis placed by leadership is different. Tel Aviv-Yafo and Berlin, for example, also put their focus on tech-innovation (i.e., smart solutions) (*Tel Aviv and Berlin Sign*, 2015) that is in part devoted to tackling the climate crisis. Smart solutions include, for example, the improved monitoring and managing of infrastructure and transportation, and the improved accessibility of information on energy in the municipality (Shefer, 2020a).

Similarly, Berlin views collaboration with Tel Aviv-Yafo and with other cities as an economic opportunity to reach new markets and to export to these markets its own experience and knowledge. A BEA employee explained that it is an opportunity to learn about climate problems and solutions from the Mediterranean area (Interview 55). According to this person, "if we could carry out an interesting project in Tel Aviv, and this project is perceived well, maybe other cities [would] approach us…. There is a big benefit for all sides" (ibid). Another driver of Berlin to collaborate with Tel Aviv-Yafo is the latter's experience with setting up an urban start-up (IT – information technology) scene (*Tel Aviv and Berlin Sign*, 2015).

As noted above, Freiburg and Tel Aviv-Yafo share closer relations than those between Berlin and Tel Aviv-Yafo as they need to address similar challenges. For example, the two cities were engaged in discussions and knowledge-exchange concerning the sustainable planning of new urban districts in each city (Interview 54).

Leipzig gained a reputation for innovation in the area of sustainable transportation, inter alia, for its bicycle system, more than, for example, in waste management systems (City of Leipzig, 2017). To the city officials, it was obvious that Herzliya would want to inquire into Leipzig's experience in this field (Interview 51). There are intrinsic, economic incentives for collaboration: nurturing and developing the business community in the city.[73] However, Leipzig also incorporates an ideological element into its city-to-city cooperation: the city's own history with environmental development. Leipzig hosts one of the largest research institutes on the environment in Germany (Helmholtz-Zentrum für Umweltforschung [UFZ]), which in turn works closely with the city on the issue areas of sustainability and of the climate at local, national and international levels. The UFZ was involved in transforming Leipzig from a former mining and industrial area to its current present-day form. In addition, Leipzig highlights local environmental groups that formed out of leading the opposition to the German Democratic Republic regime (GDR, known as "East Germany") in the 1980s. The narrative about making social and political change is therefore conjoined with the narrative about the importance and capability of the city to lead environmental change (Interview 51).

Leipzig aims to be known outside Germany for its capabilities and expertise, especially in dealing with clean water and (urban) green public spaces, cleantech and sustainable transportation. This is what the city wants to be known for and for which it seeks to gain national and international prestige (Interview 51). To the way of thinking found manifest in Leipzig, cities always "need to be ahead" (ibid) in innovation and responsiveness to meeting climate and other challenges (Interreg, 2021). These drivers led Leipzig to invest its resources and efforts into city networks, and especially the Eurocities network[74] in which Leipzig serves in the executive committee.

In the context of relations with Herzliya and other Israeli cities, Leipzig presents its aim to lead and serve as a model for others. A Leipzig official stressed that Israeli cities could benefit a lot from being members in this network (and in others). For example, Israeli cities could benefit from sharing their own experience with the IT industries, and gain exposure to new ideas and knowledge that could further improve their policymaking and practices. Being a member in this type of network could put positive peer pressure on the leadership of Israeli cities to catch up with climate-related developments in Europe (Interview 51).

The drivers of the three German cities (Berlin, Freiburg, and Leipzig) align with those of the federal ministries that were discussed in section 5.1. These include the eagerness to be a model for others, intertwined with a self-image of possessing solid experience in the fields of interest of each

[73] Insights from an informal conversation with an employee at Invest Region Leipzig GmbH, a Leipzig-owned corporation that promotes businesses in Leipzig (February 6, 2017).
[74] https://eurocities.eu/cities/. (Accessed December 14, 2021). Until December 2021, no Israeli city was a member if this network.

city (e.g., planning, transportation). These German cities are served by being a model city within Germany's overall efforts to reduce GHG emissions; they also, if indirectly, contribute to Germany's efforts to see emissions reduced on an international scale (Otto et al., 2021). Similar to what was noted by interviewees in section 5.1., the shared history between Germany and Israel that evolved after the Holocaust is a strong driver for establishing and maintaining collaborations with Israeli cities. Climate-related issue-areas are based on these relations (for example, Interview 51).

The readiness in Israeli cities to learn from others is driven by the respective city's leadership to be innovative and to be a model for others. Often, however, tackling the climate crisis is bundled with other issues such as tech-innovation and quality of life. Kfar Saba had an internal motivation to learn from others because of its mayor's will to brand their city as a leading "green city" and a model for other Israeli cities (Interview 10). This goal also reflects Kfar Saba's ability, in practice, to mobilize other cities in Israel to follow its own experience.

In Herzliya, collaboration with Leipzig was motivated by the sustainability unit, as a means to acquire new knowledge and receive legitimacy for their actions within the municipality. Collaboration also put exogenous "peer pressure" on the mayor, helping to convince the latter to act on sustainability issues (Interviews 19 and 51). The sustainability unit saw interacting with Leipzig as a means to gain knowledge of specific issue-areas where the unit saw a potential for implementation in Herzliya. It was a Herzliya official who asked Leipzig to focus on bicycle lanes and a bike-sharing system because of the former's plans to improve the infrastructure for riders, especially among the "young working population" from within and outside the city (Interview 51). According to this person, the official form Herzliya was reluctant to discuss or learn about broader approaches to sustainability that Leipzig had developed, focusing instead, specifically, on how things are done in practice (ibid).

5.2.4. Obstacles to interactions and their outcomes

By and large, Israeli public (and, to an extent, non-state) actors lack structured processes for the transfer and implementation of knowledge that is gained from abroad. An official in an Israeli ENGO that works with local authorities stressed this point for the local level, but indirectly, their words describe large parts of the central level as well: "In Israel, there is an unsystematic knowledge transfer. There are no procedures over what and how should be transferred…. Often, someone is traveling alone, and then they need to 'sell' what they saw to others [in their city or ministry]" (Interview 20). It is not uncommon for the organization of, and participation in, knowledge-transfer events and tours to take place close to the starting date of the event/tour; and the invitation and circulation of knowledge are based on the network of the organizers. This means, for example, that knowledge transfer schemes may leave behind peripheral cities and their officials who are less connected to key agents in professional networks (ibid).

This problem is added to what several Israeli interviewees from the local level have mentioned concerning the gap between the organizational culture in Germany and in Israel. This, too, reflects on the capacity and implementation practices in Israeli cities. For example, there is a lack of orderly follow-up mechanisms to examine and assess outputs from knowledge transfer initiatives (e.g., Interviews 7, 17 and 20). Officials in Herzliya and Kfar Saba acknowledged that certain work and organizational habits are barriers to collaboration and the implementation of outputs from these instances of collaboration. In Kfar Saba, for example, there is a lack of structured work methodologies to acquire new knowledge and, simultaneously, there are pressing and immediate demands from the mayor's office that sometimes interfere with completing planned work that entails implementing exogenous knowledge. Interestingly, the constant expectation from the city leadership to "innovate" that trickles down through the municipal system sometimes has the opposite effect, with little time remaining for officials to process and implement innovative ideas and solutions concerning urban sustainability (Interview 10). Similarly, in Herzliya, daily routines and practices usually obstruct other tasks that demand thorough approaches to learning from exogenous sources, including relations with foreign stakeholders (e.g., Interview 19). The incompatibility between German and Israeli working methods and organizational systems is another barrier for Israeli officials (Interview 10). However, this does not, as seen previously in this chapter, block the penetration of new ideas and the inspiration of novelty stemming from exogenous sources. In addition, the complexity and the long-term planning required for climate-related problems is also a problem for Israeli cities. In principle, it is easier for city officials to implement small-scale actions that can have immediate (visible) impacts, such as developing open and green areas in the city (Interview 10), than to invest in long-term and more demanding climate and energy projects.

Inherent, underlying perception in cities such as Kfar Saba restricts the development of comprehensive local approaches to pursuing urban climate action. The emissions survey the city made in the early 2010s, following the climate convention of 2008 (see more details in chapters 6), revealed that the GHG emissions from the city's *public sector* (i.e., GHG emissions from public facilities) were only 6% of the entire city emissions. Residential buildings and transportation attributed for much higher percentages. With that, the city withdrew in the early 2010s from almost any climate action toward these sectors in the city. Instead, the city leadership chose to raise awareness and provide supportive measures for people and businesses to act, for example, through using designated apps (Interview 10).

There is also the problem of economic feasibility. In 2016, Kfar Saba decided to invest in additional renewable energy beyond what it had in public facilities, under the condition that it proves economically profitable for the city (Interview 10). In Kfar Saba's view, the shift toward sustainable

energy production and consumption should be the responsibility of the central level (ibid). These claims concerning the "responsibility of the state" (ibid) were repeated throughout interviews with Israeli city officials and ENGOs.

Kfar Saba's restrained approach however, shows signs of change. Kfar Saba has been experimenting with infrastructure for electric private mobility and has developed an urban climate plan for the city (City of Kfar Saba, 2019, 2021; Interview 44). Similar plans have emerged in recent years in other Israel cities, such as Haifa, which had not been focusing previously on climate-related issues.[75]

Certain perceptions are dominant at the Israeli central level and, especially in the Ministry of Transportation, which put barriers in place to hinder cities from making progress with their own local climate responses in accordance with exogenous knowledge. According to a Kfar Saba official, even if new ideas can be tested in the city, the central level makes it difficult to implement these ideas on a large scale (Interview 10). This point was strengthened by other interviewees, and also made with regard to the Israeli local level in general (e.g., Interviews 35 and 40). This problem reflects the rooted perception in Israel that cities lack a legal basis to implement new policies and ideas, especially in areas such as the pursuit of sustainability and the response to the climate crisis (e.g., Interview 10). In contrast, however, climate actions undertaken by several cities, such as Tel Aviv-Yafo, Kfar Saba itself and Eilat (see also in chapter 7), show that cities can have a great deal of leverage to progress with their own policies (Goulden et al., 2017; D. Shmueli et al., 2015; Specktor et al., 2009).

A conservative or narrow and obstinate mindset among municipal officials represents another barrier that also reflects on the barriers previously noted. According to a former municipal official in Israel, it is difficult to change the mindset of municipal officials as opposed to those of the residents: "One major reason is the seniority of many people that blocks novel approaches [from being approved], like the ones the sustainability unit tries to advance" (Interview 42). Some Israeli actors perceive the local level as not being skilled enough to address innovative ideas. This stands in contrast with the central level, where implementation might be considered slow, but potent (ibid). Others, however, disagree. Several municipal and ENGO officials claimed that the Israeli municipal level is better in implementing (climate) policies and actions compared to the central level – under the condition that the city leadership is dedicated to the issue (e.g., Interviews 10, 17 and 18).

A common barrier encountered by many Israeli cities that came up in interviews is that very few cities grant their sustainability units a central role in decision-making processes, let alone authority in some of the most relevant fields. This is less notable in Tel Aviv-Yafo and Kfar Saba, which have been better at integrating climate or sustainability concerns into their policies. In Herzliya, on

[75] See https://haifa2030.com/stories/climate-environment/?lang=en (Last accessed April 4, 2022)

the other hand, while the environmental unit is involved in urban development projects, the unit was kept out of major strategic decisions concerning large-scale residential projects. These projects were discussed and agreed upon between the city leadership and Israel Land Authority (MAKI) (Interview 19).[76] This situation suggests that even if concrete policies or ideas from foreign jurisdictions are eventually transferred to the city through the environmental unit, they might face hardships in being accepted and legitimized by the city leadership owing to the unit's weak political position.

For German cities, there are few political barriers to collaboration with other cities and with Israeli cities in particular. As noted in their motivations (see above in this chapter), German cities try to export their knowledge and serve as a model for others, and are integrated directly and indirectly into federal efforts to present the German experience with climate actions. In Leipzig, for example, "carefully [stated], there is not much critical political involvement in these kind of relations.... Specifically concerning Israel, the relationship is extremely positive and supported by the city council" (Interview 51). This person also added that with Israeli partners, unlike with other partners from Europe or other parts of the word, there seems to be an immediate connection in almost all cases that they know about. Strong personal connections can ease the acceptability of outputs of collaboration, at least this is the view from the German side of the equation (ibid).

5.3. Insights into changes in climate governance in Israel

This section provides an overview of the key findings put forth in this chapter as they pertain to the research question of this study and to the influence that this study aims to assess. With that, this section examines the interactions of the German federal and local levels with Israeli actors vis-à-vis climate governance arrangements in Israel and changes that were noted in chapter 2: changes in authority, participation, innovation, and communication.

The bilateral relations between the German BMUV and the Israeli MoEP point to the contribution made by the former to floating concepts of climate actions and emissions-reduction at the Israeli central level. This takes place parallel to other processes that also floated these concepts, for example, at the Ministry of Energy and Infrastructure, yet from other perspectives and from different motives such as air pollution reduction. However, bilateral relations assisted the MoEP to ground this issue and gain legitimacy to bring it to the front, especially in the late 2010s, when more attention was paid to the issue by the government. This outcome is a moderate contribution in terms of the authority and political position of the MoEP: the dominant governmental approaches do not approve plans for decisive climate actions. In addition, the bilateral relations work better and receive

[76] These are agreements made between the central government and local authorities in the shared attempt to solve the acute housing crisis in Israel; these are known in Hebrew as "Heskemei gag" (roof agreements).

greater legitimacy when they are supported by growing networks of Israeli and German stakeholders – as seen in the drafting process of the Climate Law.

At the same time, this situation also indicates changes that occur in participation patterns. More than in previous years, the MoEP – as well as other climate-related ministries such as the Ministry of Energy and Infrastructure – are relying on external stakeholders in policy formation and agenda-setting. At times, these agendas are backed and supported by German non-state actors (see more in chapter 6). In the case of the MoEP, the growing presence of German state and non-state actors in formulating policies and presenting new ideas to the ministry can account for changes that have been taking place in how that office works, almost as though by *adding another actor* to the game. This change is also seen in processes that involve the MoEP within wider networks of climate action in Israel, which are elaborated in chapter 6.

In terms of innovation, governmental bilateral relations have culminated in a few concrete innovative policies, ideas, or solutions. Drafting the Climate Law presents, however, a notable exception and can be considered an innovation, as it is the first time Israel tries to address climate change in a systematic and legally binding regulation (Hasson, 2023). Lastly, the MoEP has done little to spread the knowledge it has gained from through bilateral relations in a systematic way to other governance levels in Israel. Often, this knowledge remains in professional niches within the ministry. This could change through greater public participation that the ministry has been increasingly involved in recently; for example, the participation that was initiated by Heschel and which engages larger and more diverse types of actors than the MoEP has been used to operate with.

By contrast, the work of the Federal Foreign Office is often more indirect. The data shows that working with non-state actors and through networks has a wider impact on Israeli stakeholders and at various governance levels than working through bilateral collaborations. The endorsement of the Water Energy Nexus project, together with support for spreading the notion of climate action in Israel through key ENGOs, have contributed to the strengthening of the positions of certain ENGOs in specific fields: Heschel on climate actions, EcoPeace in the Water Energy Nexus. Similarly, indirect mechanisms have led to some initial changes in participation patterns. There is now a more inclusive approach to addressing climate concerns, greater exposure to the issue by larger public audiences, and the stronger embrace of climate matters by research institutes, ENGOs, and state actors. Together they now form networks of actors that addresses the climate crisis in the Israeli region. The work of the Foreign Office with a small number of actors with an *agency function* in Israel has assisted in rooting climate actions in Israel. The indirect work of the Foreign Office can also be seen as contributing to innovation: The introducing of new concepts and ideas that were new or at least marginalized in Israel concerning the climate crisis can be considered innovation, in the Israeli context,

by itself. The climate crisis has been integrated into public debates with examples of new approaches for solving the crisis according to a tried model (Germany). The climate crisis has been framed as a potential national security concern to decision makers. This indirect approach assists with communicating the climate crisis better, lifting it higher onto the public agenda and adding to the growing debate over the crisis and its consequences for Israel. This form of action can therefore be identified as *orchestrated action* by the Federal Foreign Office (see chapter 2); the Foreign Office functions as an orchestrator that supports Israeli ENGOs (intermediaries) in their efforts to influence Israeli targets, for example, decision makers and agents of change. As will be also shown in chapter 6, this indirect approach also integrates other governmental ministries in Israel, which have few connections to the BMUV, the Foreign Office or other federal ministries.

A common ground for the work of the BMUV and the Foreign Office is their motivation to pursue climate actions in Israel. Relying on welcoming ground for collaboration and intervention (the shared history), and fueled by Germany's aims to lead climate action and serve as a model for this action, the two federal ministries have a clear agenda that directs how and why they operate in Israel concerning the climate crisis.

The bilateral collaborations at the city level present mixed governance outcomes. On the one hand, Tel Aviv-Yafo and Kfar Saba have been pioneer and leading cities in Israel in terms of climate action and urban sustainability since the late 2000s, before or at the outset of the bilateral climate collaborations with German cities. The collaborations assisted these cities with gaining greater opportunities to test and innovate local climate responses; yet collaborations did not contribute much to these cities' strength within the Israeli political system where they sought to confront the climate crisis. The status of these cities as forerunners has deeper roots that preexist their collaborations with German partners, and this status did not change much after collaborations took place. In the case of Tel Aviv-Yafo, innovative ideas concerning, for example, sustainable urban planning and (sustainable) energy production and consumption found their way to the city leadership, but they did not translate into concrete actions. However, ideas to which the city officials were exposed to in Germany added to the knowledge base in Tel Aviv-Yafo, which, as time passes, is scaling up to the central level or spreading horizontally to other cities in Israel. For Herzliya, the weaker city among the three, collaboration with Leipzig provided some legitimacy to climate-enthusiastic officials, but the collaboration did not result in concrete changes to policy or the development of strategic ideas. Instead, the collaboration remained limited to a niche-like space of a few professionals and officials.

Interestingly, when ideas and knowledge concerning issues such as renewable energy and energy efficiency were encountered by municipal Israeli officials – the agents of change –, these ideas were not new. Officials in all three Israeli cities that were involved in knowledge transfer mechanisms

with German partners had prior background, knowledge of and interest in sustainability and climate change (e.g., Interview 10; see also in Shefer, 2019a). This situation implies that knowledge from abroad may require knowledgeable recipients in order for that itself to be assimilated into the domestic (Israeli) domain, at least in better ways than manageable in other cities. In a similar vein, what also common among the Israeli cities is the close circle of officials that engage in knowledge transfer, and the restrained participatory approach to ENGOs, the private sector and even individuals. Israeli ENGOs, on the other hand, offer the opposite: a more inclusive approach to local climate action (see chapter 6).

The data implies that there is an inherent problem with the visibility and accessibility of German cities, and perhaps of other EU cities, among Israeli cities or other stakeholders. This is also apparent when considering the less than moderate participation and willingness of Israeli cities to take part in international and transnational schemes, at least up until the late 2010s.

Collaborations with German federal and local levels actors have contributed to broadening the networks of Israeli officials and experts that are concerned with the climate crisis and are able to serve as agents of change in the public sector. Changing their mindsets, adding to their perspectives, and providing them with concrete models to learn from (or at least to become inspired by) have resulted in important contributions to the bilateral and indirect forms of relations that were detailed above. Chapter 6 also takes up this point.

The data showed that while there are few visible or hidden objections to collaboration and knowledge transfer from the German or Israeli political spheres – not even objections based on budgeting for the initiatives –, other barriers still matter. First, relevant knowledge and examples tied to the climate crisis from Germany face competing narratives, for example, about the importance of *hard* national security concerns (i.e., narratives about securing the border and protecting the population from immediate military and terror threats), and about the need to preserve Israel's reliance on natural gas over the use of renewable energy. To open the space for more climate action, more indirect forms of action need to be taken. The MoEP actions will need greater acceptance and political legitimacy before even a few steps toward broadening, and sometime challenging, mainstream conceptions can be taken. Indirect forms of action (i.e., actions that are not bilateral and that aim to gain influence over target actors through, inter alia, peer-networks and persuasion over time) taken by EcoPeace and the Federal Foreign Office bypass this barrier: their approaches present an alternative model for national security that has gained legitimacy from the people and military and security institutions, and with that has a better chance to be accepted by large groups in Israel.

In Tel Aviv-Yafo, there are less barriers for exogenous knowledge to enter the municipal decision-making system; the city has an experienced cadre of officials and experts, and a trained

system to deal with new knowledge. Kfar Saba has a more moderate system while Herzliya lag after the former two. In all cities, however, there are scarcely any hardships created by the central Israeli level or from within the municipalities. This reality may indicate a low level of *awareness* of Israeli actors in cities' leadership and at the central level to the prospect of collaborating with foreign actors at local and central levels, and a miscalculation of its potential. (This is not the case with Tel Aviv-Yafo, which invests in transnational relations more than the two other cities). Lastly, if agents of change *within the municipality* cannot convince the city's leadership of the city's need for the new knowledge that has been transferred, there is little chance that this knowledge can be translated into action.

Israeli cities have trouble with concretizing climate goals and policies. At the beginning of this research, climate solutions were complicated to implement in terms of regulations and less economically feasible under the prevailing political conditions. Only as the prices of renewable energy declined and central-level ministries had engaged more than before in addressing the climate crisis and ENGOs had pushed for wider actions, did municipalities allow more renewable energy. This means that for the Israeli cities examined here, knowledge from abroad was not appealing enough to form wide, municipal action, or to form municipal coalitions to push, for example, for renewable energy and energy efficiency measures. And even if this knowledge had been appealing, the existing political and economic constellations hardened pioneer cities such as Kfar Saba or cities committed to the climate cause such as Herzliya against going the extra mile to implement renewable energy and step up their climate responses.

Lastly, the data also highlighted the importance of normative and political key events or timeframes in terms of relations with German public sector actors. The 50th anniversary of German-Israeli diplomatic relations released funds and provided encouragement for collaboration between German and Israeli public sector actors, helping climate concerns to float and reach a more central stage than had been the case before. This elevation of focus was conditioned by German agenda setting and the potential Israel has to contribute technologically. In short, this was a window of opportunity, one among several, that contributed to expanding networks, exchanging ideas in various platforms, and providing examples of ways to address the climate crisis in Israel.

Chapter 6: Interactions of German non-state actors and Israeli actors

This chapter examines the interactions of the most central German non-state actors working on the *climate crisis* and *sustainability* with Israeli central, local, and non-state actors (see "case selection" in chapter 3). Two political foundations with substantial involvement in the Israeli case are the Konrad Adenauer Stiftung (KAS) and the Heinrich Böll Stiftung (HBS). In addition to these two foundations, the role of other political foundations is briefly examined as well. The other German non-state actors examined include the German Chambers of Commerce Abroad (Auslandshandelskammer [AHK]) and the (Freiburg-based) Freiburg Future Lab (FFL). This chapter presents some overlaps with chapter 5, because some of the initiatives of German non-state actors include, from time to time, actors form the German public sector.

The chapter is built up as follows. The first part addresses mechanisms and outputs of the operations of KAS and HBS in Israel, the underlying mechanisms that drive them to operate in these ways, and the obstacles and barriers the two foundations face. The second part applies the same structure to the work of AHK and FFL. The last part of this chapter provides insights from the main findings on changes in climate governance according to the framework that was developed in chapter 2: changes in authority, participation, innovation, and communication in climate governance in Israel.

6.1. The German political foundations: KAS and HBS

The German political foundations are a unique creation of the German political system. They are affiliated with German (political) parties, and, with that, they often represent agendas and carry out operations that align with these parties. The foundations are funded with public money according to the share of seats of the party they align with in the German parliament; the more seats a party has, the more public funds are allocated to the affiliated political foundation. At the same time, the political foundations are considered non-state actors (Abelmann & Konarek, 2018; Thunert, 2008). Being non-state actors enables the foundation to take a broad array of actions that formal (state) actors could not have taken. The foundations can carry out tasks and distribute political agendas that their parties cannot formally do – an aspect that, as this study will show, has a critical role in mobilizing ideas and agendas in other countries.

At the time of research, KAS was considered the strongest foundation because its links with the (then) ruling party – the Christian Democratic Union of Germany (CDU). In contrast, the HBS had a weaker position because the German green party (the Greens) was not part of the ruling coalition. These differences in power are likely to have changed after the 2021 federal elections, when the CDU lost many of its seats in parliament and the Greens gained more power than ever before. The power

of the Friedrich Ebert Stiftung (FES), which is affiliated with the party with the largest number of seats in the parliament after the 2021 elections -- the Social Democratic Party (SPD) -- is expected to grow. This will probably also be the case for the Friedrich Neumann Stiftung (FNS) which is affiliated with the third member of the coalition, the right-wing Free Democratic Party (FDP).

The German political foundations have their headquarters in Berlin and "country offices" in key countries around the world (including Israel).[77] In the mid-2010s KAS established regional offices that coordinate regional cooperation in certain regions in the world that are of interest to the foundation, such as in the Mediterranean (MENA countries) and Asia. HBS has a similar practice, but it takes a different organizational form. In addition, almost all the foundations have functions in Brussels (Belgium) to coordinate their actions at the European level. The foundations are dealing with research, coordination and collaboration that suit their parties' agendas in the context of the target country. Often, support from a foundation to local actors comes in the form of financing, organizing, and providing logistical assistance to projects, meetings, seminars, and study-tours in Germany or in the target country, depending on the agenda they aim to advocate for.

6.1.1. Mechanisms of knowledge transfer

In accordance with the analytical framework that presented in chapter 2, the following section examines the ways KAS and HBS operate in general terms and in Israel. Regarding the operation of the foundations in Israel, this section does not provide a full account of the activities and initiatives of KAS and HBS in the country concerning climate change. Instead, this section aims to provide a broad array of examples of these activities in the Israeli context.

6.1.1.1 KAS

KAS is affiliated to the CDU, a conservative party from the center-right. Under Chancellor Angela Merkel as head of state between 2005 and 2021, the CDU adopted a strong pro-climate approach. This affected KAS, which increased its engagements in climate-related initiatives in and outside Germany. KAS made the climate crisis and the need to address it one of its main fields of action during the 2010s. KAS advocates climate concerns and energy alongside liberal democratic values such as free press and the rule of law. These themes also guide the programs that KAS develops and exercises abroad.

KAS, as well as other political foundations, receives designated funds to address climate concerns from the Federal Ministry of Development and Cooperation (BMZ). According to a former KAS Policy Advisor for Energy and Climate, "The political foundations are quite free to use the funding.

[77] Sometimes, a country office is responsible for several countries in one region.

Of course, it must be directed to activities in the field of energy and climate and needs to have a focus on reducing CO2 and/or adaptation to climate change" (Interview 62). The "climate" sector programs are funded with approximately two million Euro per year, in parallel to funds for the designated country programs (the country offices) (ibid).

While KAS' agenda is inspired by the agenda and principles of the CDU, it still builds its strategy on its own. This is also true in every country office, which operates according to the local context. KAS addresses climate change and energy concerns in the Middle East through putting these issues in the global context of reducing greenhouse gas (GHG) emissions and, second, these issues are a tool to create a shared agenda in the region that could dissolve or, at least, bridge over disputes (Interview 60). KAS distinguishes between funding for its general country office, which addresses a broad array of political issues, and funding for the climate and energy "sector". The latter is managed by a regional, cross-border office which focuses on activities of emissions reductions and/or climate change adaptation initiatives (Interview 62).

KAS, much like the Federal Foreign Office (see chapter 5), adapts its messages to the domestic context where it operates. Climate concerns and energy are framed differently to reach KAS' goals in these themes depending on the local context. The natural gas in the east Mediterranean also requires special geopolitical considerations and KAS "needs to be in this conversation" (Interview 62). KAS acknowledges that "many countries cannot afford to focus primarily on reducing emissions, because they have short term needs, demands and problems to tackle, for example poverty or development," and that is why it tries to "have a look at the co-benefits of clean technologies or climate action measures" (Interview 62). Reducing emissions is framed under more pressing concerns for the domestic partners, for example energy security, economic development, or creating jobs. Emissions reduction is presented as a co-benefit of that process. This way, KAS believes it can bring to the table people that otherwise would not be involved in debates over emissions reduction (ibid). There are times where addressing climate change could serve as a gate to addressing other themes. For example, discussing climate change could enable KAS to introduce certain audiences with mechanisms of public participation that align with the foundation's ideology of liberal and democratic values. This form of operation was noted by an Israeli interviewee, who stated that KAS made its way through the "climate field" in Israel under other framings such as demography, geopolitics, and capacity building at the local level (Interview 31).

The work of KAS concerning climate and energy is *soft* and *indirect* in the sense that KAS "feeds ideas" to its (target) audience (Interview 60) and tries to influence the formation of ideas, policies, and strategies of the target audience rather than dictating them what to do or posing certain conditions for their participation. KAS promotes ideas and supports normative convictions to its

partners (Interview 62) in what can be interpreted as a *steering* effect. KAS focuses on capacity building and advocating strategic reforms, i.e., leading to a policy and structural change over how to address the climate crisis. KAS tries to shift the mood, the atmosphere, and attitudes away from fossil fuels towards a climate friendly energy system (ibid), according to how Germany perceives that this shift should be done. This is done through platforms of knowledge dissemination such as experts' meetings and seminars, workshops, networking events and supporting research in and related to the target country. KAS invests a great deal of resources in organizing and operating these platforms. Reinforcing the "steering" element, KAS is not settled with providing financial support and bringing German experts to talk to the target audience alone. Rather, "we bring in the content and decide what will be the content, who will be invited and what the focus of the activity will be" (Interview 62).

KAS' work is "independent from governmental changes in Germany" (Interview 62). This position echoes the political foundations' abilities and advantages of operating in ways that the public sector such as the Federal Foreign Office and the embassies may not; for example, partnering with certain local NGOs and the private sector in target countries. According to an Israeli interviewee, the foundations "are careful not to get into each other's territory" (Interview 31). This is, according to an interviewee from KAS, an expression of Germany's political pluralism. The German political foundations "divide" areas of work among themselves, as a reflection of their corresponding political principles. The political foundations are the "promoters of the system, of this idea of pluralism in Germany and abroad"; it is a "positive competition of ideas for facing the same problems" (Interview 62).

Concerning Israel, KAS works mainly with Israeli ENGOs, networks of experts, professionals and public officials in Germany and Israel. The foundation has little direct ties with individual Israeli local authorities and governmental ministries. The scope of the interactions has changed over the years. In the early 2010s KAS provided financial support to the Israeli ENGO Life and Environment that serves as an umbrella organization of other ENGOs in the country (Interview 18). During this period, KAS initiated one of its major activities concerning energy which presents its ways of operation in the country according to the values and themes that were depicted above. The initiative focused on research and development of policies to address the new geopolitical situation in the east Mediterranean region following the discovery of natural gas in Israel. The initiative addressed energy security and economic development through collaboration with high level researchers from the Hebrew University of Jerusalem in Israel and state and non-state actors (Mertes, 2014). Aiming to leverage the gas discoveries to bring stability and enhance collaborations between East-Mediterranean countries, the initiatives engaged state and non-state actors from Israel and other Mediterranean countries together in a series of events and meetings. The initiative addressed not only

interests and perspectives of Mediterranean actors, but it also gave room to discussions on the meaning of the geopolitical changes to the EU (Interview 57). However, this initiative dissolved by the mid-2010s. According to a KAS interviewee, the engagement of Israeli private and public actors was less devoted to the initiative as their academic peers which eventually led to the weakening of the partnership (ibid).

Another example of initiatives that received KAS' support is a small-scale project with the Israeli Green Building Council (ILGBC)[78] and the Israeli Ministry of Energy and Infrastructure to prepare and adapt the country to demands that the latter needed to fulfil before and after its ratification of the 2015 Paris Agreement. This collaboration included workshops, discussion panels and presentations by German experts such as the chief executive officer (CEO) of one of Germany's central ENGOs that promote green building, -- the German Sustainable Building Council (DGNB) (Interviews 17 and 57). In addition, KAS is regularly supporting research, publication of reports and action plans regarding the climate crisis and related concerns such as energy in Israel. (See, for example, Karmi and Ronen, 2016.)

The establishment of the regional office of the foundation in Morocco in the mid-2010s changed the focus and the operations of its Israeli office. Since then, climate and energy issues have been addressed under regional contexts (Interview 57). This appears to be the reason why KAS' flagship project in recent years that involves Israel is the Water Energy Nexus project. The Water Energy Nexus is supported by KAS and the Federal Foreign Office, and it is led by EcoPeace Middle East (EcoPeace; see also in chapter 5)[79] and in cooperation of Reichman University (Israel)[80] and the Israeli Institute of National Security Studies (INSS). (See also in chapter 5.) Following that, KAS Israel office shifted fundings from climate and energy concerns to more uniquely domestic concerns such as Arab-Jewish relations and promoting democratic values in the country. At the same time, the connection with EcoPeace got stronger as the latter is the only trilateral organization that KAS Israel can work with in the region, and that also fits well with the foundation's agendas (Interview 57).

The Water Energy Nexus is a good example of the *soft* and *indirect* forms of influence that KAS exercises. With KAS, EcoPeace organized events, conferences, and tours for stakeholders in the region. KAS developed a leadership program for policy makers, influencers and high-level officials concerning water and energy in Jordan, the Palestinian Authority, and Israel. The aim of the project is "to advance regional cooperation. This was made possible by KAS" (Interview 41). The relations between KAS and

[78] https://ilgbc.org/about/about-ilgbc/

[79] EcoPeace Middle East is a regional ENGO that addresses trilateral relations between Israel, Jordan and the Palestinian Authority. The organization has offices in each of the three countries / entities. EcoPeace focuses on transboundary water issues, and in recent years it links these concerns with the climate and energy concerns.

[80] Formerly the Interdisciplinary Centre (IDC) Herzliya.

its regional partners in this project are "horizontal" and are characterized by cooperation and collaboration rather than KAS imposing the other participants to take certain actions. This project was built together with local partners. This way of work also serves the goals of EcoPeace of bridging between international stakeholders and national and local communities in the East Mediterranean region (Interview 41). The nature of the interactions implies for the common goals KAS, the (federal) Foreign Office and EcoPeace have, and for reaching these goals as a collaborative process rather than relying on and implementing knowledge from Germany or elsewhere.

It is important to note that KAS and the Foreign Office are not the only German partners EcoPeace is engaged with. For example, the German think tank Adelphi was engaged at least once in working on the Water Energy Nexus with EcoPeace (Bromberg et al., 2020); and the latter also received financial support from the Bosch Foundation (Germany's business sector foundation) for its regional Global Outreach Program that focuses on peacebuilding (Interview 41). Not only that, but EcoPeace also constantly lobbies German federal actors and the EU to receive their support (Interviews 41 and 57).

Acknowledging the partnership between KAS and EcoPeace, the former identified EcoPeace as one of the biggest and most experienced NGOs in the environmental field in Israel and the East-Mediterranean region; an organization with a focus on and understanding of geopolitics and that is also have broad networks in the region. All of these were "a good fit to the aims and goals of KAS" (KAS interviewee). KAS' headquarters pushed to establish this connection because of the *political* nature of the Water Energy Nexus. KAS deliberately prefers to work with NGOs that address sensitive political issues, because this way serves its goals better. While KAS has worked in the past with community-level organizations, "it strayed away from working on German-Israeli relationships" (KAS interviewee). The topics that KAS addresses "should be political in the sense that Germany and Israel are working and sharing ideas that affect us all, and affects the EU as well, rather than that Germany puts money into Israeli NGOs that, for example, deal with educating teachers" (KAS interviewee). A political issue in that sense is water, "which affects the entire region and affect peace; and everybody wants peace in the Middle East."; this means finding political issues that are of interest of both Germany and Israel (KAS interviewee). This approach echoes KAS' aims to be, as previously noted, "in the conversation", and this approach also presents the things that KAS can do and that the federal government cannot, officially, do or to admit doing.

6.1.1.2. HBS

Officially, HBS defines itself as a think tank that promotes and coordinates environmental and liberal democratic values in Germany and abroad (Heinrich Böll Stiftung, n.d.-b). The foundation receives most of its funding from the German Federal Government and, partly, from the EU. Marginal amounts

are gained from private sources such as membership fees (Heinrich Böll Stiftung, n.d.-a). Much like KAS, HBS promotes and advocates values, ideas and agendas that follows those of the German Green party.

Like KAS, HBS prefers *soft* and *indirect* forms of engagement and support with Israeli actors, especially from the non-governmental sectors. HBS also works with more Israeli actors than KAS over several projects concerning the climate crisis and sustainability, and often from several issue-areas (for example energy, transportation, public participation, and waste management). HBS provides support for Israeli ENGOs that work with municipalities, the central government, and members of parliament. While not a common practice, it can happen that HBS interact directly (i.e., bilaterally) with a ministry or a municipality without the involvement of a third party from Israel (Interviews 18 and 50). An HBS interviewee noted that collaboration with Israeli municipalities and ministries depends a lot on the willingness and openness of these actors to collaborate with the foundation. In general, however, officials from the Ministry of Finance and the Ministry of Energy and Infrastructure were found to be more reluctant to collaborate with HBS than their colleagues in the MoEP. (This, however, may have slightly changed since the late 2010s.) For HBS, this is the "most effective way" to pursue its goals in Israel (Interview 15). HBS prefers to provide its Israeli partners with hooks, rather than the fish; it focuses on providing tools for Israeli actors to develop their own ways to address a problem rather than provide a fixed solution. (This can be seen later in this chapter concerning instruments of public participation.) The foundation "has patience that is very rare. They are partners, which is even rarer" (Interview 15). For example, in preparations for a tour to Germany in 2015 concerning multi-sector partnerships, "HBS staff were very involved. I did not see that kind of involvement in other foundations" (ibid).

Another characteristic of the work of HBS in Israel is the small amount of financial support that it provides for projects; sometime in sums of a few thousand Euro per project. Partly, this was the result of years of low federal budgets that were allocated to the organization due to the small number of seats of the Greens in the German parliament. (Yet, this situation is likely to be changing as the Greens gain more political power after the 2021 general elections in Germany.)

HBS perceives itself as a "rallying point for the Israeli environmental movement" (Dachs [2017], cited in Shefer [2018]). As such, HBS supports and organizes events, seminars, workshops, and study tours for Israeli actors. In most cases, tours are organized with the aim to learn from Germany's experience of tackling climate change and promote sustainability and adapt it to the Israeli context (Shefer, 2018). HBS provides also financial assistance to the operation of Israeli ENGOs for short or long-term projects. These projects engage a broad array of Israeli actors, ranging from ministries to the private sector to civil society and academia. Interviewees stressed that HBS is less concerned with

the details of the actions they provide support to and are more concerned with the "guidelines" for actions. These guidelines are embedding – and, de facto, conditioning – the receiving of the support from HBS (e.g., Interview 18). HBS high-level functionaries are invited to events that are related to environmental concerns in Israel on a regular basis (Shefer, 2018). This attendance provides a normative and ideational support to the Israeli organizers; the participation of the HBS in these events assists in grounding the norms and ideas that the Israeli organizers wish to deliver.

HBS provided one of the earliest supports for Israel's environmental movement for sustainability and climate actions. Since the early 2000s the foundation has supported Life and Environment in the latter's efforts to raise awareness to the climate crisis in Israel and to propose alternative policies to tackle the crisis in public debates and among decision-makers. For example, HBS supported the publication of a "shadow report" of the Israeli Environmental movement as part of the latter's preparations for the 2002 World Summit on Sustainable Development in Johannesburg. The report presented the threats of climate change to Israel and necessary steps the country should take to tackle these threats (Life and Environment, n.d.; Nahari, 2002). HBS also assisted in funding the delegation of Israeli ENGOs that joined the governmental delegation in Johannesburg that year (Interview 2). Other steps by HBS over the years since 2002 include, inter alia, providing support for research and publishing position papers and policy proposals for Life and Environment's Path to Sustainability Coalition initiative, which unified several key ENGOs in Israel under the theme of the climate crisis (Naor & Maoz, 2015). This support, however, has weakened after changes in Life and Environment's focus of action during the mid-2010s. Since then, Life and Environment has positioned itself as an "infrastructure organization" (umbrella organization) that provides other ENGOs in Israel tools and to reach their own goals (Interviews 36 and 37).

Since 2010, three Israeli ENGOs stand out as key partners HBS has in the country: The Heschel Center for Sustainability (Heschel)[81], the ILGBC and the Israeli Energy Forum[82]. These three ENGOs address different aspects of challenges Israel faces amid climate change. The three organizations enjoy legitimacy by and access to high political levels and decision-makers in the country, as well as to the media and local authorities. The following provides a brief account of the relationships HBS has with these organizations.

The Israeli Energy Forum: The HBS provided financial support for the Israeli Energy Forum since at least 2012. This support includes grants for conducting research that presented the benefits and the technical and economic feasibility of renewable energy in Israel, and for publishing articles and position papers which "enable us to promote policy" in Israel (Interview 28).

[81] https://heschel.org.il/en/

[82] https://www.energia.org.il/. This organization went through several organizational transformations, but its core goals of promoting renewable energy and energy efficiency in Israel remained stable.

The ILGBC: The collaboration with the ILGBC started in the early 2010s. HBS provides support for events, stakeholders-forums, seminars, and study tours concerning green building, sustainable planning and energy efficiency in Israel. These activities usually involve high level public officials, the private sector and other ENGOs from Israel, as well as experts from Germany that share and present the latter's experience in these fields (Israeli Green Building Council, n.d.). A tour to Berlin in 2014 that HBS organized strengthened this relationship (Interviews 17 and 50). In general, the ILGBC perceives its German partners as more cooperative than, for instance, other European partners. According to a former high-level function at the ILGBC, the relations with German partners are more meaningful to the organization than with other foreign partners of the same scope and scale (Interview 50). A major reason for this view is that German partners are explicitly wanting to collaborate and share their knowledge and experience with others (ibid).

Heschel: HBS have been interacting with Heshcel in various projects over the years. For example, the foundation supported initiatives such as organizing a forum of municipal environmental and sustainability units within Forum 15 cities (which is open to other cities as well). This forum disseminates knowledge and enhances professional networks of public officials in these units (Interview 18). HBS and Heschel teamed together in a learning scheme aimed for Israeli municipalities to draw on German experience of partnerships between municipalities and local small and medium enterprises (SMEs) to promote (urban) sustainability (Lebovitz, 2017). One of the most prominent initiatives HBS has with Heschel in the context of tackling the climate crisis begun in 2016: a long-term project which targets almost all sectors in Israel as well as decision-makers from different governance levels, to address climate change in the country (Interview 50). One of the first meaningful actions under this scheme was a support for Heschel's Maof Aclim (Maof Climate), a three-days long workshop with approximately 90 participants from Israeli public, private and non-governmental sectors that discussed the actions needed for tackling the climate crisis in the country (Interview 33; see more on this initiative further below in this section).

These interactions represent the central role HBS has in the eyes of Heschel: "HBS is an *important channel of influence*. Although we received support and funding from other German foundations, HBS is *a strategic partner for many years*. It is a good partnership. I think they see us in a similar way" [emphasis added] (Interview 33). This person added that while the funding from HBS to Heschel is not big at all, it is nevertheless "money that we usually cannot allocate from other sources. Another interviewee provided that even though the financial support is not high, "once you have something to begin with it is easier to initiate the project and find matching funding" (Interview 15). HBS also provides resources in the form of *knowledge and thinking*, and they often connect us to (other) sources (of knowledge)" [emphasis added] (Interview 33). In addition, HBS "was very

supportive to our climate project, it is very much connected to their agenda. They support us with money, in terms of ideas and ideology, their representatives participated in our events, and they brought German experts to our events" [emphasis added] (Interview 33). Notably, this support did not replace other forms of support that Heschel received from the federal government.

As in many of its climate actions with Israeli ENGOs, the foundation deliberately emphasized the terminology of "climate" and "climate change" in the project with Heschel that was mentioned above to raise the awareness of the Israeli public and Israeli decision makers to the climate crisis. The foundation did not try to advocate for climate actions through other themes or concerns that were (and still are) in public debates in Israel such as security and economy. At the same time, "it is important to know when to use 'climate' (discourse) or how to adapt it to the goal you want to reach" (Interview 50).

6.1.1.3. Outcomes

The indirect ways of operations of KAS and HBS in Israel lead to several types of outcomes, which represent the forms of influence they exercise in Israel. This section starts with outlining perspectives of several distinct interviewees over the outputs and outcomes, and then continues with more specific outcomes that this study identifies.

Viewpoints and perspectives by different actors

In the eyes of KAS Israel office, an output of its interactions with Israeli partner(s) means a change in public awareness, an increase in media-coverage of the issue that the interaction focuses on, and a change in governmental policy. The more the idea is discussed and the more educated the decisions are the better the impact. Reaching "a change of discourse in Israel is highly important to us" (KAS Interviewee). This perspective correlates with other KAS interviewees that stressed the will to promote certain ideas and ideologies in target countries. (See also previously in this section.) KAS is less concerned with projects that yield planned and measurable outcomes; and it does not necessarily expect a certain policy to emerge from its work. Rather, KAS is concerned with "the spreading of our ideas, the formation of networks, and that people are dealing with these (climate) issues" (Interview 60). KAS does not perceive itself as a *mediator* for Israeli actors. It put less focus on bringing German experts to Israel and connecting German and Israeli actors; the latter can, in the eyes of KAS, do well on their own (Interview 57). A positive outcome in KAS' activities in Israel can also serve the foundation's work elsewhere, for example, presenting the model of the Water Energy Nexus to other transboundary projects that KAS has or that it is engaged with in other parts of the world (Interview 62).

By and large, Israeli actors and especially, ENGOs, talk very highly on the work of KAS and HBS in Israel. Other actors from the central and local levels, for example, share similar perspectives that are based, in most cases, on their participation in events and platforms of disseminating knowledge that are supported by the foundations.

A major contribution is the promotion of the climate issue in general within the Israeli system. According to a key figure in the Israeli Environmental Movement, since the late 2000s, "the German political foundations have been funding most of the activity of the Israeli civil society concerning climate, sustainability, and environment" (Interview 31). Even though their financial support is very modest, the Israeli civil society "knows how to leverage them" to a meaningful action (ibid). This contribution is significant when considering "the vacuum that exists in these fields in Israel; whatever you do have in fact a great impact" (ibid). The knowledge that is brought to Israel through, for example, tours to Germany, seminars, workshops, and meetings with German experts are "money worth". Not only that, these small sums of money and the platforms to gain knowledge from are *accumulating together* to help to develop *wider processes* in Israel (ibid). According to this interviewee, the continuous support of Israeli ENGOs is perhaps the most important support of all. Without it, "what we see now would not have been able to develop" (Interview 31. Without this support and "regardless to the identity of the foundation, the current (climate) developments would not have been happening. I did not see these kinds of efforts and investments from any other country" (ibid).

Several other key figures in the Israeli environmental movement reinforced this view but attributed them to "Germany" in general (e.g., Interviews 17 and 26). The country that has the "most motivation and activity, and probably most effective activity, is Germany. This means Germany as a whole, *as a system*" [emphasis added] (Interview 31). The exogenous influence of Europe and, especially, Germany "*was the fuel that allowed this system* (to move)" [emphasis added] (ibid); this influence enabled civil society and officials in governmental ministries to push policy forward, to qualify actors, and to progress the climate issue in local and central levels (ibid). The importance of this contribution is the *enabling of bottom-up initiatives* that fill a void that the central and, perhaps, other governance levels and sectors cannot (or do not want) to fill.

Likewise, a Heschel interviewee stressed that Germany had a role in influencing Israeli actors by presenting them real and on-going processes of the energy transition it is going through. In principle, "models of what is happening in Germany influenced the models Heschel has developed, and (also) on the broader discourse in Israel" (Interview 33). Having this view on Germany, Heschel has searched for examples of policies and practices of local energy production and consumption as well as of urban sustainability already in the 2000s in places such as, inter alia, Freiburg. Over the

years, Heschel has integrated these examples in courses and seminars it provides for Israeli stakeholders.

A former founder of Israeli Energy Forum had similar views concerning Germany and, especially, HBS. Germany had "a crucial influence on the forum. At the very basic level Germany is the model you present to Israeli decision makers regarding renewable energy. Germany marked the path" (Interview 28). This person also stressed the importance of tours and learning excursions made by the foundations and especially HBS, as well as the importance of the *on-going,* continuous financial support from Germany to civil society organizations that concern with energy in Israel. This support enabled the Forum to bring reliable and fact-driven data regarding renewable energy to decision makers in the country.

Lastly, KAS and HBS share an influence on the improvement and professionalization of work methodologies and practices of Israeli ENGOs that evolved out of the need to deal with the foundations' demands and practices (interviews 17 and 18). the need to cope with hard-deadlines and to produce project proposals, grant-applications and follow-up reports that are conditioned by the foundations have all contributed to the development of structured ways of working among, at least, several Israeli actors. The political foundations "are like the bad cop that tells you what to do. They straighten me up, they direct (steer) me. There are things I could not have done or could not have been wanting to do" without the involvement of the foundations (Interview 18). In a similar fashion, "There is a lot to learn from the Germans… The thing I took most from the tour to Berlin was their way of working. They have a vision, they set a goal, and then they implement it in a 'straight' way" (Interview 17).

Inspiration

One of the major outcomes of the interactions between Israeli actors and KAS and HBS is inspiring Israeli actors concerning potential ways to tackle climate change and energy challenges. Inspiration was noted in interviews with the three ENGOs depicted above as well as with other Israeli stakeholders that were part of the activities and the networks formed by these three organizations.

Germany was a source of inspiration to the Israeli Energy Forum in having a clear vision and goals concerning renewable energy in its "practices, in its regulations and in the methodologies to develop renewable energy" (Interview 28). This was also the case for the ILGBC. While the ILGBC has contacts with ENGOs and other stakeholders in several other countries, the relationships are stronger with its German partners and, especially, HBS and the Freiburg Future Lab (see below in section 6.2) (Interview 17). As a result, the German partners have more weight than other countries in what they represent. The importance of Germany has less to do with providing the ILGBC with specific details

about a certain program, practice, or policy; rather, it has more to do with the "broader outlook" and *perceptions* [emphasis added] (Interview 20). This means, for example, providing the ILGBC the advantages and disadvantages of certain urban planning approaches (ibid), introducing the organization policy and decision-making processes in Berlin, and providing concrete examples of these types of decisions and policies in Freiburg (Interview 17). In other words, German models serve the ILGBC as a starting point and as a reference to reach implementation of policies and practices regarding green building in the Israeli context. The ILGBC "learned what worked and what not, what Germany did and what they did not do. It is an inspiration" (ibid). This interviewee did not claim that specific activities such as study-tours to Germany led directly to a concrete action by the ILGBC. Rather, it is the *accumulation of knowledge* form these tours and other activities that enables, eventually, visions that help pushing forward policies and practices in Israel over time (Interview 17).

The impression from Germany was strong enough to send an ILGBC representative to one of HBS' tours to get inspired by planning practices in Freiburg before drafting one of the ILGBC's most notable tools – the planning guiding tool Neighborhood 360[83] (Interviews 17 and 29). The tour to Freiburg was planned so to as participants could "understand the story of the city, how the residents made the shift to a green city from the people's perspectives, and how it looks like on-site" (Interview 29). Approaches that were used in Freiburg and other places in Germany such as creating standardization to push for development of green practices were a source of inspiration for the ILGBC. Freiburg's new quarter, Riselfeld, made a big impression on the ILGBC staff as well: "how it is built according to new principles of urbanism, and how planning considers first the public transportation and only then other (land) uses" (ibid). This approach is in sharp contrast to mainstream planning in Israel. The tour to Freiburg reinforced the ILGBC's approaches and ideas regarding sustainable planning that address climate concerns to be beneficial and feasible to adapt to the Israeli context (ibid).

The ILGBC used Freiburg as an example of what can be achieved when change is needed. "There are always people that say 'no', people that explain to you what is not possible, and why. The tour to Freiburg provided us the backwind to show that things can be done differently" (Interview 29). In Freiburg, "people were confronted with obstacles, but it was important for them to make a political decision to change something. This example provides us a real example to show the 'no' people that these kinds of things are, in fact, possible" (ibid). Eventually, the case of Freiburg inspired the formulation of Neighborhood 360 alongside other sources of knowledge.

[83] http://www.nd360.org/. This tool aims to assist professional planners and other stakeholders in the planning process by providing sets of sustainable solutions for the built environment. Launched in 2019, the tool was developed by the ILGBC in collaboration with the Israeli Ministry of Construction and Housing.

Inspiration was noted by several other interviewees, yet the extent of influence differs. Following a tour to Freiburg that was organized by HBS, Forum 15 leadership changed their perception and operational concepts regarding urban sustainability. Tours of that type "redefine your goals, it gets the bar higher, so you aspire higher" (Interview 20).

Inspiration influences not only Israeli ENGOs but local and central levels officials as well. A high-level official in the Ministry of Construction and Housing shared their insights from one of the tours to Germany that was organized by the HBS and the ILGBC as follows. In the time of the tour this person served as a city-official and later shifted positions to the Israeli central level. According to this person, the tour to Freiburg "had a big impact on me. The ILGBC brought us to Freiburg and there I saw, for the first time as a city planner, a city that is truly sustainable. I saw there what we are missing in Israel" (Interview 40). The newly developed quarter in Freiburg, Rieselfeld, was inspiring in a similar way as well: "I saw there a model for imitation. I identified similar things we are doing or that we want to do at the municipal level in terms of, for example, density and land use" (Interview 40) It was "a lot of gut feeling, a lot of impression, a lot of absorption" (Ibid). Back in Israel, this person urged their colleagues to implement the examples from Freiburg in their work. When this person shifted positions to the Ministry of Construction and Housing, they started implementing the perspectives and approaches to planning that they encountered in Freiburg in their work, for example through integrating the Neighborhood 360 in the planning of new neighborhoods in Israel. It was integration of inspiration and the availability of a tool and the position of the agent – a window of opportunity -- that enabled this person to introduce novel approaches to planning practices in the ministry. Finally, this person said, "it was not only a gut feeling but (eventually) something that can be realized and adapt to the Israeli context" (Interview 40).

Innovation and learning

There are several forms of innovation other than technological innovation (see chapter 2). Innovation can be expressed in new approaches to address a policy problem, or even introducing a new idea into a system which disrupts the operation of that system and direct it to new avenues. The following section addresses the introduction of innovative ideas, approaches, thinking and solutions that were enabled by, or formed out of, interactions with HBS and KAS.

According to a Heschel employee, HBS will often commit itself to ideas and actions that are at their outset in Israel and that no one else recognizes their importance. Addressing climate problems in Israel demanded Heschel to change its focus and course of action. From a topic not high on Heschel's agenda the climate crisis became one of the main focal points of the organization since the mid-2010s. Germany and, especially, HBS, had a big share in this shift (Interview 33).

In 2015, Heschel developed its first "Maof Aclim" (Maof Climate)[84] with the financial and ideological support from HBS (see previously in this section). "Maof" is a common methodology of Heschel to engage a group of key Israeli public, private and non-governmental stakeholders under a certain theme. Following the growing interest in climate change that has evolved in Israel before and after the 2015 Paris Accord, Heschel harnessed this methodology to engage 90 stakeholders from the private, public and civil society sectors to push forward climate action in Israel. The workshop ended with "a sense of spiritual 'high'" (Interview 33). Because the Israeli environmental movement "was in a kind of stagnation, the Maof was a sign of awakens" (ibid). According to Heschel (Interview 33), the Maof pushed other Israeli stakeholders, or at least contributed to legitimatization of actions of these others concerning the climate crisis. Following the Maof there was an increase in climate-related events and initiatives such as, inter alia, the first Climate March in Israel (organized by the Israeli ENGO Green Course), the first Israeli climate convention (organized by Heschel) as well as more collaborations of Heschel and other civil society actors with local climate and environmental scientists for raising public and political awareness for the need to address the crisis. These moves allowed Heschel to proceed and develop new projects concerning climate change with key actors in Israel such as governmental ministries (Interview 33).

Another aspect of innovation and learning is the introduction of Israeli stakeholders to larger contexts of the climate crisis and sustainability. For example, introducing social values and considerations alongside the adoption of technical solutions to reduce GHG emissions. These perspectives were strongly inherent to Heschel overall view of sustainability. By and large, in Israel there is a division between the foci of organizations (for example, "green" NGOs, gender NGOs, social justice NGOs). Working with HBS assisted Heschel to start and break this division and link different (social) aspects together in the climate discourse (Interview 33).

HBS had an important role in introducing Israeli municipalities with up-to-date perspectives on tackling climate change at local level. HBS supported the 2008 Forum 15 Convention to Reduce Air Pollution and Protecting the Climate (Forum 15's Climate Convention) (Forum 15, n.d.). The Climate Convention adapted the climate convention of (the United Nation's [UN) platform] ICLEI to the Israeli context. HBS provided logistical support and funding for Heschel to realize this project. The novelty of the convention is in the *voluntary* obligation that mayors of Forum 15 cities took upon themselves to initiate climate actions in their municipalities while using, for the first time in Israel, systematic measurements of urban GHG emissions. The subsequent steps were supposed to include more concrete actions to reduce these emissions. with this initiative Israeli local authorities preceded the Israeli central level's in several years (Specktor et al., 2009). The Climate Convention was led by one

[84] https://heschel.org.il/story_186790/ (Last accessed January 06, 2022.)

of Heshcel's prominent figures at that time and one of the key figures in research and practice of urban sustainability in Israel, Dr. Orly Ronen. A Forum 15 interviewee said that the Climate Convention and the steps that were taken after its adoption were largely promoted by Dr. Ronen, and with logistical and financial assistance, and ideational backwind for the operation of the project, of HBS (Interview 20).[85]

There is little disagreement that the Climate Convention did not meet its expectations. Most of the Forum 15 cities followed the first step of measuring their GHG emissions, but almost all cities did not continue with the next steps of realizing actions to reduce these emissions. In fact, there is little, if any, clear evidence to date that Israeli local authorities managed to reduce their GHG emissions (Dor & Kissinger, 2017; Goldrath et al., 2015; Stossel et al., 2014). Instead, several cities such as Kfar Saba, Tel Aviv-Yafo and Eilat made concrete steps to reduce emissions but with little consideration of the convention.

A Forum 15 interviewee provided their view as to why local authorities did not manage to leverage the Climate Convention into a more meaningful action *at that time*: the lack of public interest that did not provide incentives for mayors to continue with that project; and the lack of professional capabilities of some of the private consultants that were hired to perform the emissions surveys in the municipalities (Interview 20). The little action taken by cities was also rooted to the source of emissions. The surveys revealed that less than 10% of the cities' emissions are caused by municipal facilities and activities, whereas the rest of the emissions are generated by transportation and residential and industrial activities in the urban jurisdiction; to which the municipality has, officially, little ability to influence the reduction of emissions. Mayors had even less motivation to pursue emissions reduction. In short, it was not "*cost effective* for the municipalities" [emphasis added] (Interview 20).

Instead, municipalities in Forum 15 turned to an area to which they have more authority -- green building. In 2015 Forum 15 cities adopted the *voluntary* Israeli Green Building Code for municipal buildings and facilities, which was developed jointly by the Forum and the ILGBC (Goulden et al., 2017). This outcome was made possible because of the ability of the ILGBC to mediate knowledge to these cities through the Forum (Interview 20). The ILGBC and the Forum functioned as an external source of legitimacy for municipalities that wanted to implement green building (ibid). Eventually, strong lobby efforts by the ILGBC and other organizations resulted in a binding *national* law to adopt the Israeli Green Building Code in many types of new residential and commercial buildings in Israel in 2021 (Brode, 2022).

[85] Notes taken after an informal conversation with Dr. Ronen, in November 2015.

While the Forum 15's climate convention did not yield, in practice, GHG emissions reduction, and nor did it result in concrete policies, it had a "disruptive" element in that it altered the actions of local and, partly, central levels actors in Israel. The convention was a frame through which actors could have addressed climate problems (e.g., interviews 13, 17 and 20). For the first time in Israel, local authorities were involved in measuring GHG emissions and in searching feasible solutions to reduce them. The convention forced local level officials and politicians to consider these matters in their decision-making processes. One interviewee shared their view that "Sometimes innovation is simply implementation. All Forum 15 cities declared that they would lead a green energy revolution: this is innovation, to be the ones that bring the news, bringing this kind of obligation to Israel" (Interview 26), and indeed, these cities "lead the green building revolution in Israel" (ibid). In other words, the climate convention presented innovation not only in terms of introducing the Israeli local and central levels a new policy and new operational practices, but it also provided novel ideas and perspectives as to how to approach climate concerns; and the convention opened a door for cities to address these issues in the years that followed. The HBS had a substantial part in facilitating and enabling this move, by supporting agents of change that drove and took the lead in this change: the ILGBC, Forum 15 and, to some extent, Heschel.

Other forms of learning and innovation include research outputs that are supported financially and ideationally by HBS and KAS. These outputs can be, for example, working papers that Israeli ENGOs disseminate to policy makers and the public before and during policy discussions (Heinrich-Böll-Stiftung, 2011; Interviews 17 and 28). These types of publications are meant to provide (new) information that could add to, support, or challenge existing data and knowledge in the effort to influence policy making. The study-tours that are organized by HBS and, partly KAS serve a similar goal. This was noted by, for example, a Teal Aviv-Yafo official who participated in a tour to Berlin that was organized by the ILGBC and HBS in 2014 (Interview 21). The tour was one of the main reasons that *green* retrofit gained interest by municipal officials (Shefer, 2019). In addition, a former official of Tel Aviv-Yafo which later shifted positions to the Ministry of Energy and Infrastructure, noted that they learned something new in every tour to Germany or in every event or a workshop organized by HBS (Interview 27). These tours have an *accumulated* impact that is translated into a new or adjusted policy or to a change of course of action. (See also in Shefer, 2018.) In other words, HBS provided an *enabling environment* for these ideas and innovations to float and examined by Israeli actors.

Innovation and learning have their limits. One of Heschel's flagship projects in 2020-2021 was the Net-Zero (NZO) project: Developing a proposal for a national plan of renewable energy that, alongside policy recommendation and relevant data for decision makers, also encompasses pilot

projects and feasibility demonstrations on the ground.[86] The project is co-developed with the Ministry of Energy and Infrastructure and with funds from the Israeli National Lottery (Mifal HaPayis). The initiative is led by entrepreneurs from the private and public sectors. The project is tailored to the Israeli context and engages high profile of stakeholders; all are factors that aimed to ease the adoption of the proposal by Israeli decision makers. The NZO project was created with hardly any support from foreign stakeholders, Germany included. The models the proposal drew from and the proposed regulatory instruments and examples from tested cases were not from Germany or from any specific country. In short, NZO was created by Israeli stakeholders that draw from layers of knowledge that they have gained over the years from various sources, and from their professional experience (Interview 45). The project may very well indicate that once "climate" ideas were rooted in certain sectors and by certain actors in Israel such as Heschel, and after a long period of support by HBS or other German stakeholders, the latter have little influence on the concrete *outcomes*. HBS and KAS exercise little influence over the *realization* of these ideas further in the Israeli system. It indicates to where the impact of learning from and by the foundations is likely to stop.

Legitimacy

KAS and HBS, and other German actors in general, are considered highly credible in the eyes of decision-makers in Israel. In some circles, receiving support from German actors may be preferred over support from other European countries or even the EU. Some Israeli actors may prefer a German support even if it means less funding than other countries (Interview 41). Considering the points raised previously concerning innovation and gaining of authority over knowledge, and considering the positive image German state actors have in Israeli eyes (see also in chapter 5), it can be safely argued that German (political) foundations are perceived in Israel as a "quality stamp" that legitimizes certain actions. For example, by teaming up with KAS, EcoPeace linked regional concerns to pressing global climate problems, thus adding meaningful political significance to these concerns (Interview 41). Another example at the local level reinforces this claim. In 2016 Herzliya organized "green" Hackathon, to which HBS invited an official from the German embassy to award the prize for the winning team. For the city, the participation of a German official in the event marked an achievement, a recognition, and an approval of its actions by a renown global model in climate change and renewable energy (Interview 14).

[86] https://heschel.org.il/nzo/

Changing the course of action

The fourth impact of the operations of KAS and HBS relates to their influence on what and how Israeli actors do to address problems caused by climate change. the ENGO Life and Environment has increased its activities regarding the climate crisis after receiving financial support from HBS: "The German political foundations have a climate and energy discourse. In Life and Environment this issue was dealt with on a small scale, voluntarily. Once the organization received financial support from HBS, the issue got pushed higher on its agenda" (Interview 14). As the issue of climate change gained momentum in Israel, Life and Environment also changed the scale of operations, as it has started to find ways to "unify Israeli ENGOs that belong to Life and Environment under the climate theme" (Interview 36).

A similar transformation occurred in Heschel. For years Heschel has been positioning itself as an organization that supports grassroots, local and bottom-up sustainability initiatives. While these foci are still high on the organization's agenda, climate change became one of the main issues that Heschel addresses in recent years, and this change also diverted the audience it targets: Heschel's leadership pushed for advocating climate concerns at the Israeli central level and among the private sector, as the leadership perceived them important actors in addressing these concerns in the country. As part of this move, Heschel strengthened its ties with the MoEP, the Ministry of Energy and Infrastructure, the Ministry of Economy and Industry, and the Ministry of Education (Interview 33).

However, this change of course cannot be attributed to EcoPeace. The latter did not initiate climate actions because of direct or indirect connections with German stakeholders. Nor did the organization draw from specific German experiences regarding water or transboundary issues. Rather, EcoPeace was one of the first ENGOs in Israel that addressed the climate crisis with a particular concern to regional and domestic dimensions. EcoPeace was one of the first organizations to link climate change and national security in the Middle Eastern context as early as the late 2000s (Freimuth et al., 2007). These concerns were addressed at that time in terms of change of precipitation and water scarcity.

Creating networks

The participation of Israeli actors in operations of HBS and KAS and their indirect contacts with the foundations through initiatives of other Israeli actors have resulted in growing networks of people that are exposed to the German experience and knowhow regarding energy and climate change. for example, the work of HBS contributed to creating networks of Israeli public officials and professionals from different sectors. A Tour to Berlin and Freiburg in 2014 (see in Tel Aviv-Yafo, 2016) have formed a group of Israeli actors that extensively lobbied Israeli political parties to increase energy efficiency,

renewable energy and green building in the country before the 2015 general elections (Interview 17). Following a similar tour to Berlin, the Israeli Energy Forum and the ILGBC joined forces in several respects: they published together a position paper regarding the adoption of renewable energy in Israel, they collaborated in professional conferences, and they joined forces to bring other Israeli actors to learning and study tours (ibid). Similarly, the Maof Aclim that Heschel organized is another example of creating a network that engages different types of sectors to promote climate action in Israel.

6.1.2. Motivations to interact

Despite the differences in the ways they work, KAS and HBS share certain motivations for interacting with Israel partners in several respects. The two foundations share similar ideology that represents aspects of the interests and motivations of Germany's outreach to foreign countries. The foundations promote liberal and democratic principles, and they strive to strengthen Germany's position as a model for others and, to some respect, as a global leader. Conversations with, for example, KAS interviewees in Germany revealed that other than presenting German interests, there is a strong conviction in their work to promote liberal and democratic values that evolved in Germany after World War II (WWII). These people see themselves almost as public servants with a commitment to push (what they see as) positive elements of German way of conduct to other parts of the world.

Addressing the climate crisis is an inherent element that integrates into these principles and values and the strive for leadership. The differences between the foundations are concerned with the ways to endow these principles and their reflections in climate actions (KAS interviewee; Interview 31). Both foundations base their operations on the notion that "climate concerns and pursuing sustainability are mainstream in Germany" (Interview 31).

HBS has a clear goal of enhancement of social change in Israel through collaborating and partnering with Israeli stakeholders (Heinrich-Böll-Stiftung, 2011). HBS perceives Germany as a "good place" for Israel to learn from as it precedes Israel in several respects concerning the climate crisis (Interview 50). This approaches also adds to what was previously noted regarding climate discourses in Israel, or the lack of them, which in the eyes of HBS is something that requires amendment (ibid).

KAS identified the central role climate change has in the German public discourse, and it aims to gain influence in shaping the discourse and the policies regarding this issue. KAS identified a gap in global climate and energy concerns: the transboundary element of climate change which relates to national security, and therefore an issue that requires diplomacy and mediation (Interview 60). To KAS, Germany fits this role, and the foundation assists in promoting this role. Thus, the nexus of climate change and security concerns is an example of the alignment of KAS with the goals and actions of the German Federal government, which drives the foundation to act. While the agenda of the

federal government is not imposed on KAS, “we try to identify areas which are of importance to the German Federal Government in the UN security council, and which are also important to us” (Interview 62). KAS tries to “find these synergies… if we see that a new topic arises or that other topics will not be of interest for the next year, we try to adapt our own activities to that, and select our topics of interest accordingly” (ibid). KAS aims for increasing the presence of Germany in multilateral and international institutions and organizations, to which the latter contributes substantial financial aid. This adds up to another important motivation: gaining access to foreign societies. Addressing climate and energy can be, according to KAS, a “door opener” to present and advocate core values that KAS promotes, namely "peace, freedom, and justice” (Interview 62).

Exporting the Energiewende is less of an interest of KAS abroad. The foundation addresses the Energiewende mainly within Germany, and with little connections to international programs. To KAS, operations to present and implement principles of the Energiewende abroad would be difficult because of the distinct political conditions where the Energiewende has been developing. However, *certain lessons* can be learned out of the development of the energy transition in Germany (Interview 60).

The leading role of Germany, at least in the eyes of non-German stakeholders, was given as a motivation to collaborate with the foundations and other stakeholders. An EcoPeace interviewee explained that “In the Middle East we struggled to put environmental issues on the agenda. The only way to do so is to engage with actors that are considered reliable and trusted here, and KAS has this (trust)” (Interview 41); “another way we managed to talk about the environment here is through national security. This is something KAS does as well, and the other political foundations do not” (ibid). This approach reflects the view that in the Middle East, if one wants to make an impact on policy makers, one needs “to connect things to national security” (Interview 41). Another reason EcoPeace collaborated with KAS was that the latter had a bigger budget and more political power than HBS at that time -- a reflection of the political power of the parties the foundations align to.

EcoPeace perceives itself, in part, as a mediator of knowledge to Israeli stakeholders; and Heschel perceives itself as “the forefront of social knowledge and thinking” in the country, i.e., a broker of knowledge and practice to Israeli stakeholders. In its search for models to learn from and to transfer the knowledge to others, Heschel came to know Germany and several known “success” cases in sustainability such as Freiburg. The model Germany provides and the potential solutions to address the climate crisis it offers were highlighted even more after the 2015 Paris Accord, when public discourse in Israel was more open than before to discuss climate concerns. Heschel took advantage of the sense of urgency in the country and tried to push more for local climate action. As was previously discussed in this chapter, the financial support of German stakeholders was an important motivation

to cooperate with German actors and an incentive for pursuing even more ambitious goals (interview 33).

6.1.3. Obstacles to interactions and to their outcomes

The first barrier to any operation of the foundations in general relates to funding. The political foundations rely on, mostly, public funding that reflects the position of the political parties they are affiliated to in the German parliament. KAS has enjoyed for many years from the position of the CDU in the German parliament and, as a result, the position of the foundation in and outside Germany was the strongest among other German political foundations. This situation may change, as it happened eventually after the 2021 federal elections, in which the DCU lost many seats in the parliament. In addition, political foundations can suffer decline of public funding due to "external" factors such as financial crises and other economic shocks that affect governmental spendings (Interview 62).

Changes in the political culture in Germany and elsewhere in the world may restrain some of the work of the foundations as well. In Germany it is expressed, for instance, in the decline of public trust in the established political system and the rise of populist parties. There are also hardships in countries that have or are developing tendencies of populist and /or authoritarian regimes, and that are less tolerant to western liberal democratic values (Hille, 2022). In these countries, KAS faces hardships in linking with local organizations that have a similar (liberal) value system (Interview 62). This is likely the case for other foundations as well. The "traditional way of work" of KAS (Interview 62) (and, implicitly, other foundations) such as conducting and organizing research, support the publication of position papers and bringing people in for joint discussions, needs to be adjusted to the new political realities as well as be complemented by new forms of actions such as reaching target audiences via social media (ibid).

These challenges are also relevant to the Israeli case, which at the same time presents a few distinct challenges unique to this case. The mode of operations of KAS and HBS has each an inherent problem. For example, KAS' main project in Israel, the Water Energy Nexus, touches upon a very sensitive issue in the region – the Israeli-Palestinian conflict. KAS targets high-level decision-making circles and political forums at the regional level concerning national security. This keeps KAS' operations bounded to small networks of experts and public officials in the political elite, but with little engagement of other (types of) ENGOs and grassroots organizations in the country. Other than that, when trying to mediate between actors in the Water Energy Nexus KAS is sometime faced with "anti-normalization" approach from Palestinian partners, which oppose the participation of the Israeli actors (Interview 60). Interestingly, this objection was not pointed out in interviews in KAS office in Israel. To reduce the political tension that is derived from the participation of Israeli actors in regional (Mediterranean) forums, and in order to bring together Israeli participants with their peers from the

region (namely, participants from Arab countries), KAS organizes these meetings on neutral grounds or by lowering the visibility of meetings (Interview 62). Being a German organization in Israel requires KAS to "handle (things) with care" (Interview 57) in its operations: "The reputation of German organizations among some parts of Israeli society is not always positive, and thus KAS needs to maneuver itself in this environment" (ibid). This reflection contrasts, however, many Israeli interviewees which spoke positively on the German engagements in the *climate* and *sustainability* arenas; it is likely that the hostile approach to German organization like KAS among segments of Israeli society is aimed at their work on more controversial concerns in the Israeli society than environmental concerns, such as peacebuilding and human rights. (See further in chapter 8.)

Another barrier is the implementation of ideas, programs, and practices that the political foundations promote in Israel. A Forum 15 interviewee expressed their opinion that "inspiration and the knowledge that Israeli actors are gaining from study-tours were not exploited sufficiently at the right time" to provide concrete steps in Israel (Interview 20). According to a key figure in the Israeli environmental movement, the tours and learning excursions that were initiated by HBS and, partly, KAS, are lacking what the Israeli environmental movement really needs: finance (Interview 26). This means that one of the major weak points of knowledge-transfer mechanisms in the form that the foundations are exercising is the lack of funding for implementation, alongside the acquisition, of knowledge.

Another barrier to implementation concerns with the Israeli central level. A key figure in the Israeli environmental movement stressed that any "meaningful climate initiative in Israel must include the central level" (Interview 31). According to this person, the lack of involvement of the Israeli central government and its functions in the 2008 Forum 15's Climate Convention was one of the main reasons for the little progress cities made after the first stage of measuring GHG emissions was completed. Likewise, in an event concerning the NZO project in 2021 and that was organized by Heschel, NZO team members implied that several functions in the Israeli Ministry of Energy and Infrastructure might pose barriers to this project or to parts of it, even though the ministry itself was one of the partners that supported the project.[87] The NZO team expressed a sceptic view that the ministry will receive the proposed plan of NZO as it is in open arms and acknowledged that some withdraws would likely to take place as a result of the ministry's view.

This situation points to the difficulties of introducing ideas that present alternatives to dominant policies and perspectives that can be found among decision-makers in Israeli ministries that are central to climate actions in the country. For exogenous knowledge to get into the system, central

[87] Personal observation of the author; the event took place online on February 16, 2021. For more details about the NZO project see above in this section.

level actors need to be part of the group or network that acquires exogenous knowledge. This point reinforces KAS' approach of targeting central level actors in Israel to promotes its Water Energy Nexus project. The HBS experience provides that their lack of direct collaborations with central level actors (noted also in Interview 50) may harden transferring of new ideas into the Israeli system. Shefer (2018) noted a similar problem in the efforts that Friedrich Ebert Stiftung (FES) (the political foundation that aligns with the German Social Democratic Party) and HBS made to introduce the concepts of circular economy to Israel, and that did not take root in Israel until at least the late 2010s. Despite the fact that the MoEP was ready to adopt circular-economy discourse form Germany (Interview 9; this interviewee linked this readiness to Israel's efforts to adapt itself to OECD standards after its accession to the organization in 2010.); and even though HBS provided Israeli actors grants for research and study-tours to Germany to learn about this concept (for example, Brener Shalem, 2013), the Israeli central level as well as other actors were not ready to accept this discourse at the time. The lack of heavy-weight actors in the Israeli government that could support a conceptual change is likely one of the major explanations for the poor adoption of this concept among decision makers.

The implementation of exogenous knowledge that is transferred to Israel from German foundations suffers also from the different approach and methodologies to policy and decision-making processes between Germany and Israel (Shefer, 2019). In Germany, unlike in Israel, there is a general agreement of governments to continue to some respect certain policies of the former government. For example, the coalitions led by Angela Merkel since 2005 continued to promote and implement renewable energy and other sustainability-related policies. Israeli governments do not have this tendency and governmental agendas and policies are often altered following changes in governmental functions. It is often the case that a new minister and their team change or even dissolve completely the policies and professional work that were promoted by the former minister. The professional levels at the ministry need then to adapt to the new agendas (Interview 17). A recent example is the support of Idit Silman, the Minister of Environmental Protection in 2023, in developing new residential areas that will allegedly serve mainly segments of the Israeli extreme right (the political camp that Silman belonged to at the time) on the expense of the public interest, and in contrast to professional recommendations of the ministry itself (Legaziel, 2023). In other words, long-term planning and implementation are difficult to reach at the Israeli central level; including those that are linked to exogenous knowledge.

Lastly, as noted also in chapter 5 concerning the German public sector, the work of KAS and HBS is dependent to some extent on targeting specific people that can carry on the work and drive action in their organizations in Israel. Almost all interviewees stressed that channeling knowledge from abroad and forming outputs in Israel is possible if there is an official or employee committed to the

cause of addressing the climate crisis in an (Israeli) organization, and if this person has the organizational and political capacity to act within the organization. This point may explain why HBS or KAS could not extend their work, networks, and collaborations with certain ENGOs in Israel such as the Society for the Protection of Nature in Israel (SPNI) regarding the climate crisis. An SPNI interviewee stressed that only since the 2010s has the organization started to collaborate with non-Israeli actors (Interview 13). In the late 2010s the SPNI partnered with one of the largest organizations for nature protection in Germany – the Youth Association for the Protection of Nature (Naturschutzjugend [NAJU]) to form an educational program of preservation of natural areas in both countries.[88]

6.2. Other non-state actors: AHK and Freiburg Future Lab

Other than the two political foundations analyzed in the previous section, there are several more non-state actors that operate in Israel. This section provides an analysis of two other German non-state actors that have links to Israeli actors regarding responses against the climate crisis. These organizations are Freiburg Future Lab (FFL) and the Israeli branch of the German Chamber of Commerce and Industry (Die Deutschen Auslandshandelskammer; AHK).[89] This section presents first, the ways of operations and outcomes of the two organizations regarding Israel, then their motivation for their operations, and, finally, the obstacles to these operations.

6.2.1. Mechanisms of knowledge transfer

This subsection details the ways FFL and AHK are operating in the Israeli context regarding the climate crisis.

6.2.1.1 ways of operation

The Freiburg Future Lab[90] is a Freiburg-based consultancy that communicates the experiences gained by the City of Freiburg regarding urban sustainability to interested parties in and outside Germany. The Freiburg Future Lab (FFL) provides principles of urban sustainability according to models that can be found in Freiburg. The FFL also provides advice and consultations regarding urban sustainability and responses to the climate crisis that are implemented in Freiburg in events and workshops outside the city. At the time of this research, the FFL had close professional ties with the ILGBC in Israel. One of the founders of the FFL, Astrid Mayer, has been a guest-expert several times in forums and

[88] https://www.deutschland.de/en/topic/environment/german-israeli-project-kranich-auf-reisen (Last accessed February 01, 2022.)
[89] See chapter 3 for criteria of focusing on these actors.
[90] https://www.freiburg-future-lab.eu/

workshops around urban sustainability in the country. Other Freiburg-based organizations including, for example, research institutes[91] had little to no collaboration with Israel beyond research and development projects, which are not examined in this study (see chapter 3).

The data reveals that in the Israeli case, the FFL collaborates directly mostly with the ILGBC, and less with other Israeli ENGOs or Israeli municipalities and ministries. In the Israeli case, and with a few exceptions, the FFL does not collaborate on a regular basis with German partners that are not based or related to Freiburg. It is usually the ILGBC that initiates a tour or an event and invites the FFL to take part in it (Interview 56). In other words, it is the ILGBC and Israeli professionals that push for interactions. This point echoes two things: first, it echoes the image of Freiburg in Israeli eyes, which Freiburg nourishes; second, it reflects the status of Freiburg and Germany in the eyes of Israelis, which put the city among their top priorities when planning to learn from abroad.

The FFL provides organized study-tours in Freiburg and its surroundings, usually around themes of urban planning and sustainable transportation. The tours are tailored to the needs and will of the Israeli participants. For example, while some tours focused on social housing in others it shifted to energy efficiency in buildings.[92] There is a broad array of topics and issue-areas that groups of Israeli stakeholders are interested to learn from Freiburg, ranging from urbanism[93] to energy efficiency techniques in buildings. Most of the learning focuses, however, on urban sustainability. To the FFL and the ILGBC, Freiburg can provide a broad range of examples of urban sustainability and how several of its elements can work together. At the time of this research FFL was hosting at least one excursion from Israel every year, and it participated in online seminars and workshops in the country that were organized by the ILGBC (Interviews 17 and 56). This activity is organized with little collaboration with the German state level (Land; Baden-Württemberg in the case of Freiburg) or the federal level. The City of Freiburg is, however, highly involved in these activities.

As a mediator of knowledge, the FFL is faced with the challenge of presenting a holistic and multi-dimensional perspective to sustainability and climate concerns at the urban sphere and in general. For example, when the FFL is communicating with engineers in a tour, the content will address not only technical details about, for example, energy efficiency solutions but will try to present engineers with the social dilemmas and political considerations that structure the dilemmas and that arise while developing and implementing solutions (Interview 56). FFL aims for enabling (Israeli) partners to "see things in their own eyes, so they could lose their prejudges perceptions on urban sustainability" (Ibid). It is making people "understand that we are not talking only about making money

[91] https://www.ises.org/home
[92] Based on drafts plans of study visit to Freiburg that were sent to the author in 2018.
[93] See chapter 5.

in buildings, but that buildings are part of something bigger, a part of a broader web of relations with its surroundings" (Interview 56).

The German Chamber of Commerce and Industry in Israel (AHK Israel) is the 'embassy' of German industry associations in the country. It represents German industries and their interests in Israel and connects between German businesses and stakeholders in the Israeli market. Given that the German market, in principle, is increasingly adopting sustainable practices of production and consumption, the AHK finds itself addressing "green" practices as well. As part of its work, the AHK coordinates delegations and excursions of German businesses to Israel and vice-versa (Shefer, 2019).

The AHK coordinates tours and events on its own, and sometimes it collaborates with private entities in Germany (Interview 49). The organization is less interested in collaborating with the German embassy or the political foundations. For example, the AHK collaborated with the German Renewable Academy AG (RENAC), a private corporation that promotes renewable energy and energy efficiency policies and technologies based on knowledge that was gained in Germany.[94] RENAC provides learning schemes and professional training and qualifications to non-German (and usually non-EU) stakeholders. A tour that was organized by AHK Israel and RENAC for Israeli private actors and public officials in early 2016 in Berlin reflects this form of collaboration:[95] The tour addressed energy efficiency in buildings and was aiming to expose the Israeli participants to on-site projects and experiments of energy efficiency in Berlin, as well as connect the participants with representatives that address energy concerns from German corporations, the federal government (the BMUV) and the City of Berlin. The presentations and the study-tours were tailored to the interest and focus of the tour. Participants received information and professional experience regarding, for instance, energy rating systems used by the German private sector and tax incentives used by the federal government to drive the private sector to implement energy efficiency measures. The tour also provided information on energy efficiency policies at the EU level and in the context of the Energiewende (personal observation of the author).

6.2.1.2 Outcomes

Inspiration

As in the outcomes that emerged out of the interactions of the political foundations with Israeli actors, interactions between the latter and the AHK and FFL were a source of inspiration to Israeli actors. Inspiration was noted by both central and local level actors, as well as by non-state actors that took part in these forms of interactions. A high-level official at the MoEP shared their impressions: "The tour inspired me a lot... you get an impression without going into details. Meeting with German

[94] https://www.renac.de/

[95] The Author participated in this tour, that took place between February 28 and March 01, 2016.

officials, having the impression of how a certain issue is being taken care of, how it influences the private sector"; and, "It gives the feeling that there is a path to walk through… once you have goals, the market and the regulations will adapt themselves" (Interview 25). At the same time, this person expressed frustration because of the gaps between the professional level they witnessed in Germany and the situation in Israel: "It is frustrating a bit, because we can do it too (in Israel)." The reality, they say, provides otherwise: the market does not understand the advantages of moving forward and that it prefers to stick to what it knows." Despite this frustration, inspiration also meant a turning point for this person. The tour to Berlin was a notable event, a turning point that widened understanding regarding the future developments of energy efficiency in buildings. However, inspiration cannot serve the ministry as guiding principles for energy efficiency, but rather a point from which the MoEP could start and adapt what its officials saw in Germany to the Israeli context (Interview 25).

Study-tours that AHK and the ILGBC are organizing sometimes result in formal or informal summaries and reports that are handed out to participants. In one case, the insights of participants on a tour to Berlin and Freiburg that was organized by the HBS were published in Hebrew and English and were disseminated to governmental ministries and cities in Israel (Tel Aviv-Yafo, 2016). In a similar vein, summary of the presentations and on-site tours were packed together with insights from participants and presented in an informal booklet that was circulated to the participants (AHK Israel, 2016).[96] This report provides an example of several layers of learning from German models, in this case from the City of Berlin. This report represents how the models in Berlin made impressions over the participants such as, in a pilot of zero-energy houses, district heating and the establishment of the Berliner Energieagentur GmbH (BEA; see also in chapter 5) to address energy concerns in the city. But beyond this, this report expresses the extent and degree of the impact of these tours: For example, the report is moving between calls to get inspired by what participants saw in Berlin (i.e., what they saw inspires them to lead a change) and for emulated learning (i.e., endorsing ideas behind the policies and programs they witnessed). The report called, for example, to adopt better participatory approaches than those that were common when participants were designing energy efficiency policies in Israel; or creating local solutions (rather than imported solutions) to solve energy problems; as well as general calls to look at what is happening in Berlin and use it as an example of what can be done in Israel.

The work with the FFL has an inspiring effect on one of its main partners in Israel - the ILGBC. An ILGBC interviewee explained that "In webinars with Astrid Mayer, we can understand the way of thinking, the values, that guide Freiburg's municipal leadership" (Interview 17). Understanding the process Freiburg went through and is now going though in its efforts to reduce urban GHG emissions

[96] Disclosure: the author was one of the editors and the coordinators of that report.

and promote urban sustainability appeals very much to the ILGBS (ibid). Another element that inspires the ILGBC and that is being highlighted in knowledge transfer schemes regarding Freiburg is the latter's story of transformation. Freiburg experienced a political crisis in the 1970s and 1980s when its residents struggled to abolish plans to establish a nuclear power plant near the city. The sense of crisis and urgency were used by protesters to turn public opinion and the political leadership against the establishment of the plant (Kronsell, 2013). According to the ILGBC, understanding this mechanism of using a crisis to drive a political change as was done in Freiburg could, for example, be used in the Israeli case regarding the housing crisis Israel has been suffering from since, at least, the early 2010s. According to the ILGBC, the housing crisis in Israel could serve as an opportunity to change planning approaches and patterns to more sustainable patterns (Interviews 17 and 29).

Innovation and learning

When asked about concrete outcomes from tours and delegations of Israeli stakeholders to Freiburg, an FFL official indicated what the latter perceives as a process of "realization of ideas" that occurs in the study-tours and on-site: a learning process that becomes more concrete to the Israeli case and to Israeli concerns over time. As part of that process, Israeli actors became more interested in "dissecting" policy processes in Freiburg. In early visits the Israeli participants were impressed only by witnessing what Freiburg is doing, but over the years "the questions became very precise, for example, who is paying for the public ground? Who is deciding how much public ground you have? How does a corporative building group work" (Interview 56)? The Israeli participants "try to understand how things work technically, financially and legally" (ibid). Israeli participants are not passive viewers, and they are engaged in iterative process of learning through discussions of questions and answers (ibid). The iterative process by Israeli participants was also evident in a tour the AHK organized to Berlin in 2016 (personal observation of the author). These situations are clearly learning processes that take place by Israeli participants. These situations are also exposing participants not only to innovative technology but also to innovative ways of thinking – at least, innovative compared to what participants knew beforehand about how to address climate concerns in urban environments.

Others had a skeptical view regarding the potential for learning from the interactions with German actors, including non-state actors. An interviewee from the City of Netanya explained that the problem lies not in where to look for solutions or even what are the solutions needed for the municipality; rather, it is the implementation of ideas, which requires greater involvement from the city leadership. Regarding their participation in the AHK's study-tour to Berlin in early 2016 (see above in this section), this person shared that the tour was "useful", but it did not push them to act: "I planned to do many of the things we encountered in the tour, even before the tour took place, such

as in energy efficiency in buildings and in future development plans" (Interview 7). To bring about a change, it is more important "to bring into people's mindset the approach, the understanding of the importance of the climate issue, and to bring a change to their daily practices and routines in the municipality. This is what I am working for" (ibid). These words imply that this person does not necessarily need new knowledge, but that these tours provide a way to see how to implement certain solutions and approaches to, for example, energy efficiency.

Networks

As with events and tours organized or supported by the HBS and KAS, the participation of actors from different governance levels and different positions in Israel in study-tours involving AHK and FFL lead to the creation of groups of people which were exposed to the same set of ideas, values and models that are rooted in Germany. An interviewee from the MoEP stressed that an important element of a tour to Berlin they took part in in 2016 was the opportunity to share experiences and understanding concerning energy efficiency with colleagues from other Israeli ministries and central agencies in Israel (Interview 25). Sharing experiences and understanding thus helps in creating a network of public officials and private stakeholders that can "speak the same (professional) language" and bridge professional gaps (ibid) when they come up in, for instance, inter-ministerial meetings and projects that involve actors from different ministries and agencies. Overcoming these potential gaps increases the chances of realizing policies and practices at the ministerial level. In the eyes of another MoEP official, networking was the most significant outcome of the tour they took part in, rather than producing concrete outputs. This person was sceptic that a more concrete output can be realized out of the tour because, to them, the professional and political gaps between Germany and Israel are too big to address and, therefore, have little chance to lead to concrete policy or practice (Interview 16). This perspective was also noted by another participant from the Israeli local level, who expressed skeptical views about the actual creation or realization of new policies and practices in Israel or, specifically, in their municipality; but who nevertheless appreciated the opportunity they gained to expand their professional network in Israel (Interview 7).

The author's own experience in the tour to Berlin that was organized by the AHK in early 2016 reinforces these views. Several months after the tour, the participants were asked to come to a meeting to discuss the potential gains from that tour to its participants, as well as discussing opportunities for maintaining the network that evolved out of the tour to continue and promote energy efficiency in the building sector in Israel. To the best of the author's knowledge, several participants did not come to this meeting, and from the original group only a few people kept in touch in the years that followed. Among these people were the AHK representative and private consultants

(personal observation of the author) – one of them, in fact, stressed the risk of the network dissolving over time, and the need to invest time and effort to maintain it in order to advance energy efficiency policy and practices in decision-making circles in Israel (AHK Israel, 2016).

6.2.3 Motivations to interact

It is obvious that the work of AHK Israel aims at advocating the interests of the German private sector in Israel. The tours that AHK organizes for Israeli participants in Germany are an opportunity for German businesses to gain access to the Israeli market. (In the tours, Israeli participants are exposed to products and services of German businesses.) The AHK is less concerned with reaching goals such as reducing GHG emissions in Israel. An AHK Israel interviewee stressed that reducing pollution, GHG emissions, and efficiency of resources are themes already integrated into business models and in many of the operations and products that German businesses can offer to the Israeli market (Interview 49).

In contrast, the operations of the FFL are driven by ideological conventions of the need to promote sustainability for the common good, and how urban sustainability should be. The FFL is less interested in elevating Freiburg's position in the world; but rather, the FFL is eager to convince people to know more about the city, what the city has achieved over the years, and that these achievements can be reached by other cities: the most important output is "to show to people that are interested in ecology and want to drive things forward, that things are possible and that they are not too complicated" (Interview 56). It is "less sharing a vision, but rather sharing concerns and caring for something; we emphasize the quality that can be gained, more than the profit" (ibid). This person continues, saying that "Sustainability means that a whole system is working, not only one thing in it"; and "the holistic nature of sustainability is the most important point" they want to deliver. In their view, it is crucial that professionals become aware of this view: "It does not make sense to build a hundred parking spaces somewhere, if you do not have bicycle lanes in the city" (Interview 56). It is thinking "a bit more on a higher level," how things are integrated together (ibid). This person stressed that understanding is not neutral and that it needs to be on the political agenda of the stakeholders involved: "We always try to talk about politics of Freiburg, because in the end, this is what matters" to bring about a change (Interview 56).

Lastly, a key figure in the Israeli environmental movement claims that what is common to all the German non-state actors that operate in Israel or with Israeli actors is the will to maintain the special relations between Germany and Israel (Interview 31). According to this person, addressing the climate crisis was added to these relations: "Addressing climate change was an issue that got incorporated into the special relationships because it is an important topic in Germany and Europe"

(Interview 31). This person estimated that German stakeholders "thought it (climate change) is a central issue in Israel as well, and so they integrated this issue into the Israeli discourse" (ibid).

6.2.4. Obstacles to interactions and their outcomes

The data shows that there are no German or Israeli institutions and political powers that are actively trying to deter organizations such as the AHK and FFL from operating with Israeli partners. The obstacles and the problems that these organizations are facing regarding knowledge transfer and the realization of that knowledge relate to mechanisms and forces within the Israeli system.

At the same time, several interviewees stressed that the process of learning by Israeli participants *in general* is unstructured and inconsistent with an eclectic choice of ideas, methods, and targets. This approach to learning came up in a conversation with Forum 15 and a public official from the City of Netanya (Interview 7), one of Israel's rapidly developing cities.[97] Netanya needs to address several urban developmental plans over a large area and, at the same time, provide solutions to climate change as part of its commitments to Forum 15. The city presented several initiatives over the years that intersect with steps to ease climate impacts on the city, for instance, appointing a municipal ecologist that is part of decision-making processes in the city; a move that later was adopted by other municipalities in Israel (Interview 13). Netanya, like many other cities in Israel, did not present a structured or clear process of acquiring knowledge from (overseas) exogenous sources. The city works from time to time with international maritime organizations concerning marine preservation, and in 2015 the city had an initial engagement regarding municipal environmental concerns with its sister-city Giessen (Germany) (Interview 7).

Other obstacles relate to the differences between the German and Israeli political and organizational systems; and the differences in the challenges that Germany and Israel are facing amid climate change. The AHK and FFL need to address these differences in their ways of operation. The political and institutional differences between Germany and Israel have an effect. An Israeli interviewee claimed that "the differences in resolution (of policy and practice) between Germany and Israel" are too big to bring about concrete results (Interview 16). An FFL interviewee added to this claim: "The political framework (of the actors involved) is more important than what people think"; thus, the FFL needs to translate the unique circumstances of Freiburg to something which Israeli participants can relate to or understand (Interview 56). This person gave an example of energy sources: In Israel there is a strong lobby and political support for using natural gas which, to the FFL, put barriers on *discussing* renewable energy in the country. In contrast, renewable energy is taken

[97] According to an interviewee from Forum 15, the official form Netanya is well known for their experience and diligence in working on urban sustainability.

almost for granted in Freiburg and in Germany in general. Thus, as opposed to Freiburg, where politicians from the left and right have a common understanding – i.e., a common set of values – regarding the need to advance and develop greener approaches to municipal energy policies, "In Israel there is too much fragmentation and too many cultural differences among people that it might make things harder to reach a consensus over these kinds of issues as in Freiburg" (Interview 56; see also in Shefer, 2019). Regarding differences in the challenges the two countries are facing, Germany needs, for example, to address energy efficiency in heating systems in buildings due to very cold winters whereas in Israel energy efficiency is required for cooling systems due to the country's hot weather. These differences mean they need different technologies and perhaps different policies. This difference kept some of the Israeli participants in the 2016 tour to Berlin the AHK organized (with RENAC) skeptical as to what Germany can "offer" Israelis in this regard (personal observation by the author).

In addition, the tour that the AHK organized in 2016 to Berlin as well as several other tours show that the AHK provides Israeli participants with less, if any, encounters with German civil society actors and research institutes that are part of the (political) process that shape regulations and policies regarding energy concerns in the country. The tours are "technocratic" and put little focus on the social and political dimensions that shape the situation Israeli participants are witnessing (personal observation by the author. See also AHK Israel, 2016).[98] As seen above, the FFL provides that perspective in the context of the City of Freiburg.

Other barriers relate to the Israeli system. Several interviewees (e.g., Interviews 10, 17 and 18) stressed fractions between the Israeli central and local levels, which could have indirect impact to both levels regarding the dissemination of knowledge they gained from abroad to other actors in Israel. A MoEP official that took part in the 2016 tour to Berlin that AHK organized expressed their view that there is a lack of coordination between the Israeli central and local levels. The former provides good, professional knowledge and the latter presents good capabilities and working habits, yet the connection or linking between the two is too weak to engage them together toward improved outcomes (Interview 16).

An Israeli ENGO interviewee expressed negative views regarding tours to Germany in the form HBS or AHK are organizing: "I did not hear about something meaningful that came out of these tours. These tours provide motivation and networking, but I do not feel that something exciting came out of them" (Interview 35). With these tours "you reach a very limited number of people… You put a lot of energy, you engage people, but then they might leave their position and all the experience and knowledge they gained is lost" (ibid). According to this person, these tours could be more effective if

[98] Based on a *draft* plan of a tour to Berlin in 2022 that was sent to the author.

they include ways of "bringing these people together to think how to implement what they saw, how to share their knowledge" (Interview 35). This criticism points to one of the strongest barriers in the present knowledge transfer mechanisms depicted in the Israeli case: the lack or gaps in understanding of Israeli actors regarding the goals of these tours, and what they provide. However, in contrast to this view, many tours and meetings of German officials and experts with Israeli actors incorporate on-site examples to show 'how things work' in Germany. The gap in understanding implies therefore that a key barrier is background knowledge: what are, and what can be developed out of knowledge transfer opportunities. This gap may also point to misunderstanding by German actors concerning the ways to approach certain types of Israeli actors in their attempts to incorporate the latter in these mechanisms.

6.3. Insights into changes in climate governance in Israel

Clear evidence from this chapter is the indirect form of influence that characterizes the two German political foundations (KAS and HBS). The two foundations choose specific partners in Israel, usually ENGO(s) in a key position within the Israeli civil society sphere, that the foundations signal as having the potential to mobilize action among other Israeli actors in addressing the climate crisis. This is evident in KAS choosing EcoPeace and HBS choosing organizations such as Heschel, the ILGBC and the Israeli Energy Forum. These last three organizations seem close in their agenda and purpose to those of the HBS, perhaps more than other Israeli ENGOs; for example, 15 Minutes (sustainable transportation and planning), the SPNI (especially its planning functions) and Adam Teva V'Din (ATAD) (legislation and regulation), Zalul (water management) and Forum 15 (Interviews 13, 14, 20, 35, 36 and 42). (The data concerning ATAD was drawn from informal conversation in 2017 with a former high-level employee in the organization, and from an online search.[99])

The way KAS and HBS operate clearly points to orchestration mechanisms: the orchestrators (foundations) connect with intermediaries (Israeli ENGOs) to influence targets (Israeli decision makers and other actors). As noted concerning the HBS in Shefer (2018, p. 12), the foundation "serves as a major link to acquiring and developing new knowledge and translating/adapting this knowledge to the local Israeli context"; "the Heinrich Boell Foundation provides institutional, material and normative support for this knowledge to be implemented, while it assembles and coordinates domestic actors." With that, HBS "advances certain agendas, ideas, policies and practices concerning climate change and sustainability to Israeli decision-making circles"[100] (ibid). Both HBS and KAS act this way as they are external actors to the Israeli system that lack capabilities to reach their goals and pursue their

[99] Addressing the Israeli climate law was a novelty in the organization that took place after this research begun. See chapter 5.

[100] Shefer (2018) addresses the Heinrich Böll Stiftung as "Heinrich Boell Foundation" (HBF)

interests in that system. The Israeli ENGOs have a similar agenda to those of the two foundations, and the former possesses the access and sometimes has the legitimacy to push this agenda into the Israeli system. Often, the Israeli ENGOs lack financial and, sometime, ideational resources to act on in the Israeli system, which they can receive from the foundations. The foundations and the Israeli ENGOs are therefore inter-dependent on each other and as will be shown below, the dependency on each other have implications for governance arrangements in the Israeli system.

In contrast, the AHK and the FFL's operations in or with Israel cannot be regarded as orchestrated mechanisms of influence. Unlike the foundations, the AHK and the FFL do not aim to steer other actors, influence policy making, or mobilize others to act. AHK and the FFL do not necessarily aim to achieve a change in the target jurisdiction or by the target themselves. Instead, they serve as mediating platforms of information and creating professional networks. Their work therefore leans toward policy transfer: they are transferring or translating knowledge and expertise from "their" jurisdiction (for example, Freiburg in the case of the FFL) to other jurisdictions. Regarding the FFL, in the Israeli case, the ILGBC is the main recipient point that mediates this knowledge to others in the Israeli sphere. Considering the role of the ILGBC in Israel one can claim that the relations between the ILGBC and FFL are orchestrated relations, with the ILGBC an intermediary that delivers knowledge to Israeli targets. However, as mentioned above, the FFL lacks crucial elements and the intention to make it an orchestrator in this case.

In terms of governance changes, it appears that the orchestrated relations enable, or at least strengthen, forms of *authority* over an issue-area among the Israeli ENGOs. Their authority over an issue-area is expressed in their ability to translate and shape ideas through their actions, while others do not act this way. The Israeli ENGOs manage to position themselves as focal point of knowledge and expertise around different aspects of climate and energy within the Israeli ENGO scene or in decision making circles. This is not to say that prior to relations with the political foundations these ENGOs did not work on issue-areas related to climate and energy; but the support from the foundations strengthened and grounded the expertise of these organizations, and assisted them to gain and maintain their power as the top-organizations in these fields in Israel. The support of the foundations is evident, for example, with Heschel, which initiated the Israeli climate conventions; with EcoPeace, which floated the nexus between climate and national security interests in the Israeli context; and with the Israeli Energy Forum, which advocated renewable energy among decision-making circles.

While Life and Environment has promoted actions to tackle climate change in Israel since the early 2000s, for instance, through its Path to Sustainability Coalition initiative (see above in this chapter), it was not until the mid-2010s that this issue gained momentum in the Israeli public sphere and in decision-making circles. And at that point of time, the three intermediary ENGOs that were

noted above were able to strengthen their power regarding these concerns in the Israeli context – and as interviews revealed, the support of the foundations was significant to enable these moves at that time.

However, the other side of gaining authority is the bounding of climate concerns to small niches of professionals and public officials in Israel, that were linked to the three ENGO operations, at least, until the late 2010s. To the best understanding of the author, Heschel, ILGBC and the Israeli Energy Forum did not put their efforts into trying to "translate" these concerns and the consequences of the climate crisis to the public. This "job" was kept for (or taken by) other organizations such as Green Course and Greenpeace, which adopted a confrontational approach against the central government and acted to influence decision makers and the public through protests and provocations. Greenpeace, for example, made a continuous, persistent campaign for PV energy in Israel which, according to a neutral observer (Interview 14), influenced some of the major moves the Israeli government has made concerning PV instalments in Israel since the mid-2010s.

Innovation and learning. There is enough evidence to suggest that the work of the German non-state actors led to innovation and learning processes among Israeli actors, albeit to different extents. The three intermediary ENGOs (ILGBC, Heschel and the Israeli Energy Forum) presented, through their work with the foundations, new ideas and models as to how to tackle problems that are related to the climate crisis through their expertise and based on models and examples from Germany. In Israel, which presents a serious gap between the official acknowledgment and declarations by the central and local levels regarding addressing climate problems and the concrete steps that are being made, the foundations – as well as the FFL - provide innovative thinking that challenges common practices and approaches in the country. This innovative thinking is also linked to dissemination and learning processes that evolved in Israel after introducing new ideas to Israeli actors.

However, as the examination of the obstacles of knowledge transfer mechanisms showed, the main problem regarding innovation and learning was the translating of the innovative ideas into practice in Israel. The way the Israeli system is structured and the gaps between central and local levels (which seem to be getting smaller in recent years), makes realization difficult. This evolves into a situation where Israeli stakeholders may possess information, and so are their peers in professional networks, but they do not have the platforms or the forums, and sometimes the knowledge, to try and implement the knowledge they have. This may be a blind spot in the operations of the political foundations and, to some extent, the FFL. In other words, the foundations open the door for Israeli actors to innovation and learning, but there are times when the foundations (and, again, the FFL to some respect), put less emphasis on how to realize innovativeness and learning outputs in practice in Israel through and by the target audience.

Participation. The work of the foundations emerges as having a substantial impact in terms of the participation of Israeli actors. In the case of HBS, it is noted in how it supported the (intermediaries) Israeli ENGOs to bring into the discussion on climate action in Israel other Israeli actors from the public and non-governmental sectors. Heschel and ILGBC appear to be the most active ENGOs in this regard, but the Israeli Energy Forum has also managed to engage central and local level actors to jointly address renewable energy and energy efficiency in the country. This pattern takes a different turn with KAS. While some of KAS's initial actions in Israel regarding energy and climate concerns have tried to bring into discussions various actors, such as researchers and the private sector, the recent flagship project of the foundation – the Water Energy Nexus – as well as linking climate and national security, seem to target almost exclusively high-level decision makers with little involvement of other civil society organizations, local authorities, and the private sector. The actions of both KAS and HBS and the networks that emerged out of their actions create agents of change that go about and (try to) bring a change within the organizations the latter belong to, in the public or the non-governmental sectors.

The work of the AHK does not focus on promoting pluralistic and democratic participation or any other value-system, in Israel; it is not the organization's area of expertise nor interest. But nevertheless, the AHK managed to engage a large number of Israeli public and private actors in its tours to Germany and events in Israel on issues such as green buildings and energy efficiency. Doing this, the AHK contributed to the creation of professional networks of like-minded people.

What the data also suggests is that the AHK and the foundations have little coordination and cooperation between them. This separation occurs while both the foundations and the AHK address similar topics, they share certain motivations to act in the Israeli context, and they aim for similar targets in Israel.

Lastly, one of the intriguing elements that comes up in participation relates to the role of the political foundations in the Israeli climate governance system. To some respect, the political foundations *became another actor* among the pool of public officials, civil society actors and other actors such as research institutions in the Israeli climate governance system. The extent of their involvement with Israeli central and local level actors and with ENGOs, and their influence that sometimes goes beyond the intermediary ENGOs noted above, show that they became an integral part of the group of actors that shape the governance system in Israel that address the climate crisis and, partly, energy concerns. The role of the foundations in this system is similar to that of an ENGO or a think tank that work directly with a certain group of actors and indirectly with larger groups of actors in the Israeli system. Their position as *non-state* actors enables them to have access to spheres and actors that official state actors may face resistance from. They may also have legitimacy in the

eyes of Israeli actors to shape and change climate concerns. In their presence in the Israeli climate and environmental scene, and through their participation in forums, events and learning processes, the foundations are becoming part of the processes of change they are promoting in Israel, rather than taking a more passive approach through, for example, providing financial support only (see chapter 7).

A key contribution to the climate governance system in Israel in this regard is what this study identifies as *climate coalitions* – a coalition of like-minded actors that are centered around the foundations, around other actors with the support of the foundations, or even around a certain theme such as climate change and national security. The foundations are integral actors in these coalitions, together with public and non-governmental Israeli actors. These coalition are pushing the agenda as to the *need* and, sometimes, the *ways* to tackle the climate crisis based, for the most part, on ideas and values that originated and were tested in Germany, and are appreciated and legitimized by key Israeli actors.

Communication. The German non-state actors contribute to governance changes in the form of communication between Israeli actors. The support given by the foundations to the intermediary ENGOs provides fertile ground for the dissemination of ideas. This occurs either in Israel or in Germany in study-tours and similar forums in which Israeli actors take part. As several interviewees pointed out, the foundations facilitated or, at least, substantially supported the formation of networks of professionals and officials in which these groups of actors can take part and exchange and share their ideas; and some of the outputs where knowledge-items that were meant to reach decision makers and other types of crowds such as position papers and feasibility studies. This is true to the AHK and the FFL as well. The AHK‘s operations involve mediation and dissemination of knowledge to and from Israel; and the FFL operates in similar paths but in a smaller scale. However, as noted in the previous subsection, there are obstacles for scaling knowledge within the Israeli system and, especially, between the local and the central levels.

Chapter 7: The European Union's interactions with Israeli actors

This chapter analyzes interactions between the European Union (EU) and Israeli central, local, and non-state actors concerning tackling the climate crisis. With the central level, the analysis examines the EU Twinning projects and aspects of regional EU-Mediterranean networks, in which the Israeli central level takes part. At the local level, the analysis focuses on two Israeli cities – Kfar Saba and Eilat. The two cities are forerunners in climate responses at the Israeli local level and they present long-term engagements with the EU (see Chapter 3). Concerning interactions with Israeli non-state actors, the analysis draws on data from key Israeli Environmental Non-Governmental Organizations (ENGOs) rather than focusing on one or several instances of interactions between these ENGOs and the Union. This approach derives from the different nature of interactions: In most cases, the EU supports ENGOs with funding of various projects rather than developing bilateral relationships. Each part of the analysis provides the forms and outputs of these forms of interactions. The subsequent parts provide the drivers of the parties to take part in interactions, the obstacles these interactions face and finally, the expression of these interactions in terms of governance changes that were identified in chapter 2: changes in autonomy of actors, participation patterns, communication among Israeli actors and developing elements of innovation.

7.1. EU projects with the Israeli central level

This subsection elaborates on EU interactions with the Israeli central level. As will be sown, these interactions take the form of individual projects. The sub-section focuses on bilateral and regional (multi-stakeholders) types of projects.

7.1.1. Twinning projects

At the time of research, the bilateral environmental relations between the EU and Israel were centered almost entirely on to Twinning projects. Notably, during the very last years of the 2010s, things started to change and there has been more focus on climate and energy concerns (Ministry of Environmental Protection, 2022b). Twinning projects are developed by the EU's DG-NEAR 1 unit in Brussels, and they are run by the EU delegation to Israel in Tel Aviv-Yafo. The Israeli partner of Twinning is the Ministry of Environmental Protection (MoEP), which is responsible for recruiting other Israeli stakeholders for the project when necessary. One major reason that environmental relations revolve almost entirely on Twinning is that Israel is a developed economy that does not fall under the DG-NEAR's main operations of development aid cooperation. While the Twinning projects are not officially titled under "climate" actions, the Israeli MoEP and the EU de-facto treat them as such. For example, these projects are framed as efforts to improve resource efficiency which assist in reducing

the country's Greenhouse Gas (GHG) emissions reduction (Ministry of Environmental Protection, 2020a). The narrative of, for example, the first two Twinning projects highlighted concepts of green growth and resource efficiency with the aim of ultimately achieving more climate-friendly practices in Israel than before (personal communication at the BMUV).

Twinnings are big projects. Each Twinning usually involves several hundred thousand to over a million euros worth of investments, funded entirely by the EU. The operation of the projects is coordinated by the Delegation of the European Union to Israel (EU delegation) from its office in Tel Aviv-Yafo. The delegation is also responsible for monitoring the projects. In principle, Israel (i.e., the MoEP) can apply for a Twinning project on topics according to its preferences and priorities. Once approved, the EU publishes a bid for EU public and private stakeholders, and the winners serve as contracting agents for that project. The first Twinning (2013-2015) aimed to improve regulatory frameworks for pollution reduction in Israeli industries. The second Twinning (2016-2018) was born out of the first and focused on assisting small and medium enterprises (SMEs) in implementing regulatory frameworks. The third Twinning (2019-2021) addressed improvements of waste management frameworks (Ministry of Environmental Protection, 2020a).

In practice, Twinning involves the training of and learning by Israeli actors from the experiences of the contracting European partners. This process involves on-site visits and study tours in Israel and in Europe, and participation of private and public actors. Each Twinning has an EU representative that is designated by the EU and operates from within the Israeli governmental body that is partner to the Twinning. In the environmental and climate-related Twinning this is the MoEP. The European contractors provide advice and examples concerning regulation of resource management for SMEs, but they are not responsible for integrating and implementing the gained knowledge in Israeli systems (personal communication at the BMUV).

An interesting aspect of the Twinning projects in Israel concerns the involvement of German stakeholders. As already seen in chapters 5 and 6, Germany is a central actor in the Israeli environmental fields in general and concerning climate aspects in particular. German actors won the bids of the first two Twinning projects as the leading EU parties for the project. The engagement of German stakeholders regarding the Twinning project requires, therefore, attention.[101] The EU delegation to Israel stressed that there is no pressure or influence of German stakeholders on the nature and processes of Twinning projects in Israel. As the MoEP has the final word in deciding on the

[101] The strong involvement of Germany in the first two Twinning made EU officials in Israel to ask, in humour, to bring someone that is *not* German for the third Twinning. Ironically, this "wish" came true when eventually, German actors did not participate in the third Twinning.

identity of the parties in the (Twinning) consortium, and as the MoEP has on-going and close ties with German partners, it is only natural for the ministry to choose German partners.[102]

In addition, the German experience of working closely with Israel also plays a role in formulating these projects at the EU level in Brussels. An EU official explained that DG-NEAR has specific mechanisms to consult with private consultants about how to realize a project in a specific country. Because the cooperation with Israel is small compared to other projects with non-European Mediterranean countries, and the budgets are lower, DG-NEAR turns directly to member states that have or seem to have expertise in the field that the designated Twinning project addresses: "The area in which Twinning projects are taking place depends on the Israeli authorities' proposals. We look up member states that have capabilities for that. And it is true that Germany often expresses interest and availability to work with Israel" (Interview 48). A conversation at the BMUV reaffirmed the point that the MoEP relies on the "German experience" in the fields of the Twinning. German officials were confident that Germany will win the third Twinning, even before the results were known, based on the good experience of the two former projects (Personal communication at the BMUV). This, however, ended up differently (see footnote in the previous page).

For Germany, Twinning seems to be another channel to gain influence abroad. First, Twinning provides German stakeholders an opportunity to learn from others' situations. Second, and perhaps more significantly, Twinning is an opportunity for Germany to increase opportunities and channels of collaboration with Israel while pushing for addressing environmental issues. Twinning is "very good for increasing the scaling and spreading" of knowledge and expertise that Germany can offer (Personal communication at the BMUV).

Alongside Twinning, there is another EU instrument of learning and training that Israeli actors are using, called TAIEX (Technical Assistance and Information Exchange). TAIEX involves one or a few learning platforms, such as study tours concerning a specific issue-area or practice in the EU. Originally, this instrument was developed for countries that want (or expect) to become EU member states to adapt to EU regulations. Over time, this instrument was extended to EU neighboring countries. TAIEX cannot, however, overlap with a Twinning project. But much like Twinning, TAIEX is also based on the "client's" request and this request needs to fit EU regulation and legislation. The MoEP is considered a "heavy user" of TAIEX, for example concerning areas of water and pollution (EU Neighbours south, 2019; Interview 46). As already explained in Chapter 3, tracking participation of Israeli actors in TAIEX platforms was not feasible under the time and resource restraints of this research. However, it is taken into consideration in the overall understanding of the EU bilateral relations with Israel regarding addressing the climate crisis.

[102] Interpretation of comments and reflections from a conversation at the EU Delegation to Israel.

7.1.2. EU regional networks and projects that incorporate the Israeli central level

Other than the Twinning and TAIEX there are a few more engagements of Israeli ministries in EU regional networks that address the climate crisis. However, from the data that was collected to this research, it seems that the Israeli interest in these initiatives and projects is limited. Sometime, these initiatives include other Israeli actors on top of the Israeli central level, for example, ENGOs and private entities. DG-NEAR 2 is the EU Unit that is responsible for EU regional networks and programs that Israel takes part in.

An example of such network is the SwitchMed,[103] a bundle of collaborative environmental projects and consortiums for south and east-Mediterranean countries with the EU. In principle, the EU provides funding and the United Nations Industrial Development Organization (UNIDO) is responsible for the implementation of the project. SwitchMed finances consultants from the EU that, in turn, hire local consultancies in the target countries to implement the project on the ground (Interviews 3 and 46). This way, knowledge and expertise are developed in the target countries while maintaining EU stakeholder involvement. There are three beneficiaries in the target country that takes part in SwitchMed: the local private sector which receives technical assistant and advice in order to be able to improve access to the EU's demands on green/circular economy; the national level that benefits from the improved policies; and civil society actors that receives support for promoting green consumption and production in the target country.

One of the biggest SwitchMed projects involving Israel focused on introducing and implementing green economy concepts to the country. Key stakeholders in Israel included, inter alia, private entities, governmental ministries such as the MoEP, and the (ENGO) Heschel Sustainability Center (hereinafter Heschel).[104] A DG-NEAR official explained that Israel was chosen for this project because of its potential to collect and assess data for the project better than other countries (Interview 47). In other words, the country already possessed high technical expertise when it entered the project and at the same time, could still benefit from improvements of this and other expertise. This interviewee stressed that, as in many other EU-Israel projects, the green economy focus was a request from the MoEP, which identified it as an area that requires improvement in Israel.

7.1.3. Outputs of interactions

A former high-level staff member of Life and Environment expressed their view that the influence of the EU (and Germany) fueled climate actions in Israel in both the public and non-governmental sectors

[103] https://switchmed.eu/

[104] https://switchmed.eu/wp-content/uploads/2020/04/National-Scaling-up-Roadmaps-EN-Israel.pdf ; See more on Heschel in Chapter 6.

(Interview 31). The external support allowed ENGOs to introduce new knowledge and certain policies to push forward climate concerns in the Israeli local and central levels. The Twinning project, unlike other bilateral agreements, was very helpful at the Israeli central level (ibid).

The Twinning projects are a way to get the best standards on a given issue-area, based on (presumed) best practices available in the EU. With that, Israel improves it status, position, and access to the EU market (personal communication at the BMUV). Twinning allows Israeli partners to gain first-hand experience from best practices. Eventually, the policy making process becomes more professionalized in the field area that the Twinning addressed, as well as in other areas. For the MoEP, the Twinning projects are an opportunity to professionalize in a certain field through external funding that they might not be able to receive otherwise. This was acknowledged by the EU Delegation to Israel, which pointed to the professional way the ministry approaches these tasks (Interview 46). This experience is translated to manuals that summarize and guide public officials and professionals on the issue-area that the Twinning focused on. For example, the second Twinning produced 16 guiding papers and manuals to support the MoEP, other ministries and the private sector in their work to reduce pollution and environmental risks.[105] (See also Ministry of Environmental Protection, 2022a.)

A hidden aspect in the outcomes of Twinning project is the use the MoEP is doing in these projects to improve its political position and increase the legitimacy of its policies and other actions in the Israeli national political level. Other than gaining expertise, Twinning provides the MoEP "prestige and more power because, like in many other countries, the MoEP is not so (politically) strong. It makes the MoEP stronger in these fields" (Interview 46). This person emphasized this point by sharing a counter experience from the early 2010s. Then, officials from the international unit at the Israeli Ministry of Energy and Infrastructure applied for Twinning regarding natural gas. The application failed because the application was not tailored properly to the EU demands. To this interviewee, the application was aimed to gain prestige and serve inner politics within the Ministry of Energy and Infrastructure rather than solve a real problem and improve professional standards (Interview 46).

Projects such as SwitchMed seem to lead mainly to improvement of expertise and professionalization of the Israeli actors that are involved in the project.[106] The MoEP identifies a certain need or an area to improve its expertise and tries to tackle these needs through the channel of the regional project (Interview 47). This improvement is less relevant to decision makers, such as top-officials and the minister (Interview 46).

As technical projects, the gained knowledge and expertise tend to remain in close pools of (Israeli) professionals. Things remain at a technical level and therefore might have little chance to

[105] https://eeas.europa.eu/delegations/japan/28019/node/28019_ka (Last accessed January 17, 2022.)
[106] https://switchmed.eu/wp-content/uploads/2020/04/National-Scaling-up-Roadmaps-EN-Israel.pdf (Last accessed May 05, 2022.)

disseminate to other stakeholders or to be translated into practices in other areas of interest. The nature and complexity of these projects imply that smaller and less experienced organizations than, e.g., Heschel may have trouble taking part in this type of initiative, which holds a potential to leverage their expertise and gain them access to projects that integrate knowledge from abroad (Interview 47).

Twinning and EU Mediterranean programs (see below) present conflicting contributions to Israeli actors. On the one hand, Israel comes to EU-Mediterranean projects with advanced capabilities which enable it to present its expertise, compared to other partner countries. On the other hand, this position negates the aims of the EU in these programs (especially in EU-Mediterranean programs) to transfer and implement knowledge in partner countries (Interview 46). There are Israeli officials that treat EU regional platforms lightly and put them at the bottom of their priorities. For example, an official at the Israeli Ministry of Energy and Infrastructure explained that some components of the EU's CLIMAMED regarding energy efficiency "are integrated in my section as a project, so some of my daily job becomes part of that," but they are far from being among the top priorities of this person (Interview 38). With that, Israeli officials and, consequently, Israeli decision makers miss the potential for learning and benefiting from professional networks.

7.2. EU projects with the Israeli local level

The EU does not have bilateral relations or bilateral projects with Israeli cities. Instead, Israeli cities are participating in regional projects, networks, or research consortiums that are organized or financed by the Union. Several Israeli cities took part in EU projects over the years. This subsection focuses on the City of Kfar Saba in the Union's SUDEP project[107] and the City of Eilat in the Union's Clean Energy Saving Mediterranean Cities (CES-MED) project[108], and the SUDEP project[109]. Several other Israeli cities took place in the CES-MED project (Shefaraam, Rosh Ha'ain and Ramle) but, following the case-selection criteria in chapter 3, these cities are excluded from the analysis in this research.

In principle, it is up to the Israeli cities to apply for EU projects, and the Israeli central level is supposed to disseminate the Union's calls for applications for these projects and to assist cities in the application process. From the EU side, EU-Mediterranean projects that engage local authorities operate in a similar way. In most cases, the EU has a coordination function, and EU and local consultants implement the projects on the ground. In the Israeli case, coordination is not exercised by the EU Delegation Office to the country. The delegation has no mandate to contact local authorities

[107] http://www.sudepsouth.eu/posts/israel-kfar-saba (Last accessed May 05, 2022.)
[108] https://www.euneighbours.eu/en/south/stay-informed/projects/ces-med-cleaner-energy-saving-mediterranean-cities.
[109] http://www.sudepsouth.eu/posts/israel-eilat; and https://www.euneighbours.eu/en/south/stay-informed/news/israeli-town-slashes-energy-consumption-support-eu-funded-programme

directly and the former is instructed to disseminate these calls through the Israeli central level only (Interview 46). The EU Delegation to Israel does not have close or regular contact with Israeli NGOs that are concerned with the Israeli local level such as Forum 15 or Masham (the organizations that unite local authorities in Israel). Furthermore, in the view of officials at the EU Delegation to Israel, cities from the Forum 15 have sufficient capabilities to navigate themselves in the EU system and they do not require the mediation of the delegation.[110] This view is in contrast to previous times when the delegation had in fact more direct contacts with Israeli local authorities regarding peace building projects with Jewish/Israeli and Palestinian cities. The 2010s showed a decline in these initiatives. Therefore, the EU Delegation to Israel re-directed its projects to weak and weaker cities in Israel, with the view that their status aligns better with the aims of the Union concerning regional collaborations with neighboring countries (Interview 46). The following examination of Eilat and Kfar Saba provides insights into these forms of operations and their implications.

7.2.1. EU Interactions with the Israeli cities of Eilat and Kfar Saba

Eilat is a small, peripheral, and low-medium income city in Israel's southern border on the shores of the Red Sea. The city is a well-known tourist spot that enjoys warm weather for most of the year. The main impacts of climate change on the city are increasing temperatures in an already hot area, and the danger of declining coral reefs in the red sea – one of the city's main tourist attractions. Excess energy for cooling and dealing with urban heat are additional challenges the city will need to face in the near future. In recent years, however, the city jumped on the climate wagon, and now it is a model for several climate and energy initiatives in Israel and, perhaps, in the world. The city receives almost 100% of its daytime electricity from renewable sources from the nearby Eilat Eilot, a public-benefit corporation for research and development that serves as a test ground for renewable energy and related sustainability solutions.[111] The connection to Eilat Eilot enabled the City of Eilat to start and gain momentum as a leading city in renewable energy in Israel.

Eilat participated in two EU initiatives: SUDEP and CES-MED (see above). SUDEP's project addressed green neighborhoods (SUDEP south, n.d.-a), and CES-MED's project addressed smart and energy efficient cities. Over time, Eilat did not fill up administrative steps in the latter project and, thus, officially it was not part of it.[112] However, as will be shown further below, this situation did not restrain the city's gains from EU projects. The city began these engagements in the late 2000s, when a new head was appointed to the municipal environmental unit. This person started to search for new

[110] Officially, Israel is ranked low in terms of environment and health EU research project. However, de facto Israel is engaged in many EU studies that address climate and energy through "industry" research project, including for example, transportation (Interview 46).
[111] https://www.eilateilot.org/
[112] https://www.com-med.org/en/about/covenant-community/our-cities.html (Last accessed May 20, 2022.)

avenues of funding for environmental concerns, on top of what the city and the MoEP have been allocating on a regular basis. The environmental unit hired a designated consultant to work on applications for EU projects; this individual later joined the environmental unit as a public servant. The efforts of the environmental unit resulted in their joining the SUDEP's project in 2014, together with eleven other Israeli municipalities. This process received political backing from the city's deputy-mayor at the time. Joining SUDEP "boosted the smart city project, because it provided us with resources and infrastructure" that enabled the unit to show progress and results (Interview 30). According to this person, the EU and Eilat aligned the two projects together under the context of energy efficiency. This way, Eilat was able to make bigger steps in energy efficiency in infrastructure and education beyond the boundaries of one neighborhood (ibid). This move was made despite the fact the Eilat was not, officially, included in the CES-MED project because of administrative processes (Interview 46).

As already noted in Chapters 3 and 5, Kfar Saba is a pioneer in urban sustainability in the Israeli context. Kfar Saba was one of the first cities that took part in EU projects in Israel. In 2015, the city led a three-year SUDEP project to implement smart energy meters in schools and other public facilities in the city and in several neighboring Arab (Muslim) municipalities. The project was funded with 240,000 Euro by the EU, and an additional 60,000 Euro were granted by Kfar Saba (SUDEP south, n.d.-b). The German Development Agency (GIZ) provided technical assistance for this project. One of the main aims of the project was enhancing collaboration between youth from the involved cities and households around the issue of energy efficiency amid the need to tackle the climate crisis. In 2021, Kfar Saba joined an EU consortium called SME4SMARTCITIES[113] under the CES-MED framework. The consortium aims to strengthen the integration of small and medium-sized enterprises' (SMEs) digitalization processes linked to urban environments and municipal systems. Reaching this goal was framed as part of urban sustainability of the cities in the consortium. As mentioned in chapter 3, projects that were initiated after 2020 could not be addressed thoroughly in the analysis of this study. Therefore, the SME4SMARTCITIES is addressed here as a general reference of Kfar Saba's interactions with the EU rather than addressing the project's components and outcomes.

7.2.2 Outputs of interactions

According to an Eilat official, joining a SUDEP project was a turning point for the city; "A meaningful move that created a shift in the municipality's perception" (Interview 30). If, before that project, "Eilat invested 20,000 NIS a year (in environmental initiatives), suddenly we received 500,000 euro… A Half of million before you even made one move….. There are changes in terms of what money does. A change of perception" (ibid). This official continued saying: "You start reaching for higher standards,

[113] https://sme4smartcities.eu/

and you try to be more attractive for (potential) collaboration with European countries. You become more professional, more strategic" (Interview 30). In addition, the SUDEP and CES-MED projects enabled Eilat to expand the work of the Environmental Unit and increase its resources. These projects also prepared the city to take part in Horizon 2020 projects and, generally, they opened the city to new international and transnational opportunities, collaborations, and funding schemes. For example, the city takes part in the Morgenstadt consortium that is run by the German Fraunhofer Institute.[114] Referring to the funds that collaborations with foreign and domestic actors provide, "*Eventually this is money that brings capabilities, knowledge and, as a result, better quality of life for residents*. This is the end goal" [Emphasis added] (Interview 30).

The city managed to develop and maintain innovative solutions, additional collaborations with foreign stakeholders and the ability to take advantage of these projects for its own benefit. The confidence that Eilat gained in exercising autonomy to address problems related to the climate crisis and the confidence the city gained in its capabilities to address these problems also enabled it to extend its networks and to position itself as a legitimate actor in international and transnational platforms regarding renewable energy and energy efficiency, and regarding the efforts to tackle the climate crisis. Eilat was accepted into a Horizon 2020 project over sewerage water treatment with 23 other partners (Project O).[115] To date, Eilat is now part of, or in contact with, sustainable tourism initiatives[116] and pilot projects with Israeli and global tech companies concerning smart solutions for energy consumption and transportation (Interview 30; Shefer, 2020). In parallel, the city engages with small-scale EU funded environmental transboundary projects with Jordan and Egypt (interview 30). City officials "understand that we also need to collaborate more within Israel, for example with the academia and tech-companies" (Interview 30). The city has enhanced its collaborations with Israeli partners such as the Society for the Protection of Nature in Israel (SPNI). This is regarded as an improvement in the city's approaches to planning, which are now aimed to produce more participatory outputs than before. However, participation of residents in these processes is still limited in Eilat even though it had previous experience with engaging residents through EU projects (Interview 30).

These developments indicate that through participating in EU projects and platforms, a peripheral city which, until very recently, hardly raised the interests of Israeli decision makers and ENGOs, could manage to gain power and capabilities to address climate and energy concerns. It seems that other peripheral and politically weak cities in Israel such as Ramle, or even richer cities such as

[114] https://www.morgenstadt.de/en.html
[115] http://eu-project-o.eu/ (Last accessed March 16, 2021.)
[116] https://newsbeezer.com/morroco/eilat-enters-the-club-of-the-most-beautiful-bays-in-the-world/ (Last accessed March 17, 2021.)

Rosh Ha'Ain, which were part of the CES-MED projects together with Eilat, did not manage to translate their participation in these projects into equally meaningful urban climate action.

This development was intertwined with the evolving understanding of some high-level officials in Eilat regarding the importance of these issues not because the Environmental Unit stressed it, but "because it is common (notion) now" (Interview 30). In other words, the EU project and its potential benefits came in time when the municipal political leadership in Eilat was ready to back such projects. For example, a trip of the deputy mayor of Eilat to a waste management Expo event in Munich in 2012 won the deputy's attention to sustainability concerns, which made the SUDEP project more appealing a few years later (ibid). Likewise, even though Eilat is not officially part of Forum 15, the city voluntarily adopted green building standards to new buildings, albeit not on the scale of the Forum 15 cities (Petersburg, 2020). Promoting green building is part of the perceptional change the city leadership went through. Under the title of being a smart city, "people said we need green building. The city engineer can approve green building more easily than before when the atmosphere around him is in favor" of concepts such as smart cities (Interview 30).

Interactions between the EU with Eilat reveal an interesting aspect regarding the Israeli governance system. Eilat conducted and applied the SUDEP project with hardly any, if any intervention or participation at all of the Israeli central level. Nor were Israeli ENGOs part of the project as well (Interview 30). Furthermore, it was claimed in Eilat that when the city turned to receive support from the MoEP or the Ministry of Energy and Infrastructure in the form of recommendation letters for applications to the projects, as well as later on in application to the EU's Horizon 2020 projects, the Israeli ministries were slow to react and seemed to misunderstand the nature of the projects and the opportunities it could have provided not only for Eilat but for the ministries as well. "We tried to make high rank officials interested, telling them we work on innovative things here. But it seems that they are buried in their daily tasks, even though they are open to things like (reaching GHG) emissions reduction" (Interview 30).

The outputs and benefits of interactions with the EU that Eilat presents are only partly visible in Kfar Saba. The SUDEP project managed to present youth and the involved communities with opportunities and ways of reducing GHG emissions. (In 2018, it was estimated that approximately 500,000kg GHG emissions were saved through this project [(Bartov, 2018)].) However, according to city officials, the project was not as much a milestone in developing urban climate policies as it was in gaining more power to address climate concerns as was in the case of Eilat (Interviews 10 and 44). One potential explanation for that situation is that Kfar Saba, as a pioneer in urban sustainability in Israel, it did not require external projects of the type that the EU provides to position itself as an innovative and leading municipality. Another potential explanation is that, as a member of Forum 15,

Kfar Saba is already in line with advanced urban climate actions in Israel, e.g., in green building. In this position, Kfar Saba may have less of a need for an external party such as the EU to assist it in developing climate responses. However, according to municipal officials in the city, Kfar Saba did take the opportunity of the SUDEP project to get more professionalized in, inter alia, GHG emissions reduction and standardization (Interview 10). It is very likely that the learning process under SUDEP assisted Kfar Saba to position itself as a city capable enough to lead a consortium such as the SME4SMARTCITIES – a position that Eilat was not capable of at the time of research (Interview 30).

The autonomy that Eilat and Kfar Saba gained to address climate-related problems following their interactions with the EU (to a different extent in each city), is coupled with innovation and learning that evolved as part of these interactions. In Eilat, innovation is tightly linked to innovative technological solutions to address energy efficiency via smart (hi-tech) solutions. Nevertheless, given the new capabilities and the confidence Eilat gained in addressing problems related to the climate crisis, the city also presents innovative approaches in terms of policy and decision making. Specifically, it initiated actions that were new to the city and, at the time, new also in comparison to other Israeli cities. Only a few cities in Israel managed to bring themselves close to the pioneering position in urban climate action Eilat is enjoying, without the heavy weight support of the central government.

The innovation that Eilat is pursuing is also expressed in its efforts to position itself as a testing ground for energy and climate solutions. First and foremost, Eilat benefits from the proximity to Eilat Eilot (see above in this sub-section). Eilat Eilot performs research and development, and it serves as a testing ground for various private initiatives with support from the Israeli central government. Eilat Eilot does not draw from European or German experience in its operations. However, the EU projects in Eilat have indirectly benefited Eilat Eilot as well because the latter was involved as a stakeholder in some of these projects (Interviews 30 and 39).

Kfar Saba was less influenced by the SUDEP project than Eilat was in terms of political authority and capabilities. A former head of Kfar Saba sustainability unit implied that to them, this is a marginal project compared to what they are doing in the city in the sustainability fields (Interview 10). Instead, the major contribution of this project was gaining access to new knowledge and the opening of the door to opportunities to receive external funding. In other words, Kfar Saba came to EU projects from a better starting point than, for example, Eilat because it was a local environmental pioneer. The city “takes advantage of the EU call for applications and funding to learn new things from European case studies, (and with that) to improve future applications” (Interview 10). An EU official implied that by and large, Israeli cities such as Kfar Saba are already a few steps ahead of other cities in the southern Mediterranean, and therefore their participation is less beneficial in terms of improving their capacities and practices (Interview 46). This person also implied that Kfar Saba

managed to get its place in SUDEP after teaming up with its Israeli partners in this project – the neighboring Arab municipalities that are much below Kfar Saba in terms of social, economic, and political indicators. In other words, Kfar Saba was pushed to work this way to get into the project – and to have access to its funding (ibid).

7.3. EU projects with Israeli non-state actors

The previous sub-section noted that the EU has few direct ties and collaborations with Israeli ENGOs that address climate concerns and sustainability at the local (city) level. This sub-section develops further the examination of the Union's relations with non-state actors in Israel that address the climate crisis.

7.3.1. Forms of relationships between the EU and Israeli non-state actors

The EU provides support for Israeli NGOs that advocate policies and actions that correlate with its agendas to the ENP countries on a regular basis. (See more in chapters 2 and 4.) This support is especially significant to NGOs that address human rights, democracy, and peacebuilding in Israeli society and regarding the Israeli-Palestinian dispute, which do not enjoy public and political support in Israel.

Over the years, the EU supported ENGOs such as EcoPeace Middle East (EcoPeace), Heschel, Life and Environment and the Israeli Energy Forum.[117] EcoPeace, for example, received financial support from the Union up until the early 2010s, and it also took part in the Union's Sustainable Water Integrated Management consortium.[118] Since the mid-2010s EcoPeace relies less on the Union for financial support. However, the organization continues to lobby the Union to maintain the latter's political support – a practice EcoPeace executes regularly with many foreign stakeholders (Interview 41). Other Israeli ENGOs such as Zalul and 15 Minutes, which address aspects of climate concerns such as water management and transportation respectively, have more indirect forms of engagement with the EU. This involves, for example, participating in forums and meetings that are organized by the Union and provide little to no direct financial or other forms of support. This analysis does not examine this form of indirect support.

The Union's support for ENGOs includes financing their activities, usually for a limited period, or granting specific ENGO projects. In most cases, the ENGOs receive support when the projects or the goals they pursue match the Union's goals (Interview 48). The EU supports fewer study tours and exchange visits to Europe than the German political foundations do. During the 2010s the Union made

[117] The characteristics and the operations of these organizations are presented in chapter 6.
[118] https://swim-sm.eu/index.php/en/

a strategic decision to increase its ties with civil society organizations in Europe and beyond (e.g., CONCORD, 2017). Specifically concerning Israel, during the 2010s the Union acknowledged its need to increase support to Israeli ENGOs in their efforts to advocate climate-action within Israeli society.[119]

7.3.2. Outputs of interactions

According to the EU Delegation to Israel, there is no clear definition of a "successful" project with Israeli ENGOs. This is in contrast to projects with visible outcomes such as the Twinning. For the delegation, capacity building would be regarded as a positive, indirect side-effect. However, "A successful project means that it managed to achieve something no one thought it would. Otherwise, it's just 'ticking the right boxes'" (Interview 46).

The grants the EU provides to Israeli ENGOs support the acquiring and development of knowledge, and its dissemination to other Israeli actors. This means that the EU's support for, at least some, (target) Israeli ENGOs enable wider learning processes in larger settings in Israel. For example, the EU provided grants for the Environmental Badge (2011-2014), a program that aimed to bring local authorities in Israel - especially those which are not part of Forum 15 - to take early steps in renewable energy and energy efficiency by installing photovoltaic panels (PVs) in public spaces and changing light bulbs in street lighting. The Israeli Energy Forum provided professional support for the program (Federation of Local Authorities in israel, n.d.; ynet, 2013). The financial support of the EU dictated the focus of the program and its agenda to address climate concerns in politically and economically weak local authorities (Interview 28). The project turned out to be a success in the eyes of the forum because of two reasons: First, the project introduced novel thinking to local authorities that were indifferent to climate concerns. The project created or, at least, enabled agents of change within these authorities, which could have applied this thinking in future projects. Second, the project enabled the Israeli Energy Forum to learn different approaches to energy policy and its implementation, at different sites with different problems than it has previously been thinking of addressing (ibid).

Heschel is another Israeli ENGO which has received EU financial support on a regular basis for many years. The support is similar to that of the Israeli Energy Forum: the ad hoc financing of projects and the provision of finance for the operations of the organization itself. Indirectly, the Union has an indirect benefit from this support in the form of inspiration. An interviewee from Heschel explained that the Union opens the door to learning from models and examples of "European attitudes" (Interview 33). This means that by collaborating and interacting with the Union, Heschel is exposed to ideas and attitudes to action and policies regarding tackling the climate crisis that prevails in the Union

[119] https://europa.eu/capacity4dev/file/106387/download?token=hshO6VFl (Last accessed May 20, 2022.)

and directing its operations. According to this person, ”The EU and Germany have direct and indirect influences over us and through us, and not only through us, in the Israeli scene” (ibid).

Participation in the Union’s regional programs develop the experience and improve the professionalization of Israeli ENGOs and other actors, in a way that assists them in later applications to EU grants and programs (Interview 46).

There are, however, Israeli ENGOs that do not apply for or that receive very little EU support, such as Zalul and 15 Minutes (Interviews 35, 41 and 42). These organizations are looking for exogenous sources of knowledge to challenge Israeli decision makers, e.g., by providing them with examples from the EU. This process is, however, unstructured and has little to do with the EU’s aims. Instead, this approach echoes a general attitude by Israeli ENGOs and other actors to adopt and implement better standards of operation in Israel than the current situation.

7.4. Motivations to interact

The motivation and drivers of the EU to interact with Israeli actors in the ways that were depicted above are similar to those of the German actors. (See in chapters 5 and 6.) One of the founders of the Israeli Energy Forum elaborated that on top of the EU’s self-interest of maintaining stability in the southern Mediterranean and the Middle East,[120] “the EU officials I met had expertise with a sense of (ideological) mission” to push for “something more vital” in the area (Interview 28), and not (only) to keep the interests of, for instance, European industries in the area (ibid). An official in the EU Delegation to Israel reinforced this claim, stating that the motivation of the EU in its ties with Israel lays purely in an interest to improve the general environment in the country (and in other EU-neighboring countries) out of genuine environmental concerns (Interview 46).

In terms of Israeli actors, an EU official pointed out that in their view, what characterizes Israeli actors that take part in EU-projects is that they seek, in most cases, to solve a certain problem but are not interested in other aspects of the problem. In part, this approach derives from Israel being a developed economy, and therefore the EU can best provide it with “improvements” of an issue-area, rather than trying to solve a problem from its very beginning as might be the case in developing economies in other parts of the Mediterranean (Interview 46).

As shown in the beginning of this chapter, German stakeholders take the opportunity to participate in the EU’s Twinning projects to export their knowledge and expertise but, also, to learn from others’ experiences. These expected gains could therefore hint to the indirect motivation of German actors to take part in EU Twinning in Israel – the chance of positioning Germany as a leader in a certain field and grounding the potential of its expertise and experience in climate-related policies

[120] See also in Chapters 2 and 4.

and practices for use by others. (See project description and objectives in, e.g., *EU-Israel Twinning Project* , 2015.)

Concerning Israeli stakeholders, an official from Kfar Saba pointed out that taking part in the SUDEP project was done more out of a will to gain knowledge, expertise, and experience *in such projects* rather than to gain knowledge and experience in energy efficiency practices. Adding the Jewish-Arab element to the program was made deliberately to increase the chances that the city would be accepted into the project (Interviews 10 and 46). An interviewee from Heschel added that Israeli ENGOs and other stakeholders are taking part in EU projects because Israelis see themselves "connected to Europe. The UN and the EU are often denounced by Israeli politicians, but when Israel needs these institutions, it certainly knows how to take it" (Interview 33). This person stressed that the role models for Israel regarding global sustainability initiatives such as the UN Sustainable Development Goals (SDGs) are European countries; "we see ourselves part of that family, so what the EU is doing echoes here" (ibid).

7.5 Obstacles to EU interactions and their outcomes

The EU's operations in Israel regarding the climate crisis and energy are not facing political resistance from Israeli actors. This contrasts with the EU's actions regarding human rights and peace building (Interview 46). In fact, while there is a lot of tension between the EU and Israel regarding human rights and the Israeli-Palestinian dispute, other channels are remaining close and even growing. Research and development between the Union and Israel are flourishing, and Israel continuous to take part in the EU's regional and bilateral projects (Interviews 31 and 46).

Therefore, obstacles regarding to the ways the EU and Israel interact, and the way Israeli actors operate with the gains from these interactions appear to be more prominent than political barriers. One interviewee pointed to a common problem in the Union's operations with external partners: the attitude that the EU is "doing the MoEP a favor" and that the latter is supposed to comply with whatever demand the Union (or the project) has (Personal communication with an EU official). Another obstacle relates to the legitimacy of the Union in the eyes of some of the Israeli actors to *provide* knowledge – unlike its legitimacy to provide financial support and platforms for, e.g., innovation and learning. For example, according to one interviewee, a Union's workshop to prepare Israeli stakeholders to the 2015 COP21 in Paris led to modest impact on the participants. In contrast, the *on-going* work of German actors in the years *before* and *after* the Paris Accord have made continuous and long-term impact on Israeli actors (Interview 31).

Several interviewees stressed the complexity of the EU system as another obstacle for Israeli actors to engage in EU programs and projects. The large number of programs and cooperation schemes, the overlaps between them and the complexity of bureaucracy involved deter some Israeli

actors from participating. The application processes for EU projects are complicated and requires expertise that only a small number of ENGOs, cities and private actors have in Israel. It seems that this problem affects the ability of Israeli actors to engage in knowledge transfer initiatives and platforms. Sometime, ”One hand does not know what the other is doing in different departments (of EU institutions) that are responsible for regional and local projects” (personal communications with an EU official; reinforced by, e.g., interview 7). A conversation with an experienced municipal official in the City of Netanya showed little knowledge regarding EU initiatives that are available for Israeli municipalities in the caliber of Netanya. While this example alone cannot point that all or a large part of municipal officials in Israel are lacking this awareness, it indicates a problem of awareness of parts of Israeli actors that address climate concerns to what the EU does, and the opportunities it offers, to Israel. The lack of awareness adds to the view of an EU official regarding gaps of knowledge in the Israeli system. This person expressed doubts that the central level in Israel was aware of some or all the CES-MED projects that take place in the country (personal communication with an EU official).

Another obstacle that relates to the way interactions are undertaken concerns with certain capabilities Israeli actors have. Because Israel already possesses a relatively high degree of expertise compared to other countries in the south Mediterranean, Israeli partners may find it difficult to fit to the “one size fit to all” programs that are characterizing EU (Mediterranean) regional programs. These programs assume that the participants are in the same line in terms of their technological or governmentality capacities (Interview 46; personal communication at the BMUV).

At the same time, knowledge that was gained through EU regional programs may be lost by Israeli participants. Especially, weak local authorities that participated in an EU project are likely to abandon what they learn and will have troubles continuing the momentum of the project with no clear follow-up mechanism and budgets after the project ends. This is in contrast to Twinning and TAIEX, which are seen as a good use of EU knowledge by Israeli actors (Interview 46). Also in this context, Eilat presents an inherent problem that is common to many other cities in Israel in its size and political position: A lack of professional and experienced public officials in the fields of climate change and energy, and lack of experienced officials in transnational platforms and implementation of outputs from these platforms. However, Eilat is distinguished among many other cities in Israel. The city compensates for these problems in that it is small enough to run decisions quickly in the municipal system, and in that it offers itself as a site for experimentation and pilot projects of solutions for climate and energy challenges in urban and hot and dry desert-areas (Interview 30; Shefer, 2020b).

7.6. Insights into changes in climate governance in Israel

The following summarizes the findings concerning changes in governance according to the following elements: authority, participation, innovation, and communication (see also chapter 2). The EU system of support is based on financial support for certain purposes that fit the union's interests and ideology. While German non-state actors present active and even interventionist approaches in interactions with Israeli actors (see chapter 6), the EU maintains a role of remote coordinator, a mediator of expertise and source of finance. The four elements of change above are therefore examined through these roles.

Authority. The Israeli MoEP is the main beneficiary of Israel's *bilateral* relations with the EU concerning tackling the climate crisis. Through the Twinning projects, the MoEP gains expertise and experiences that are technical in nature under a broad (professional) framing of reducing GHG emissions. However, the extent that this project contributes to the positioning of the MoEP as an authority around climate change is less evident. The professionalization of the ministry in the areas of the Twinning and its involvement in regional networks remain in niches, even within the ministry itself. In a similar vein, the City of Kfar Saba did not obtain meaningful political and professional profits from their participation in EU regional projects. Participation served them to receive EU funds and expand the pool of knowledge-sources for future actions.

In contrast, participating in EU projects contributed to the professional and political ability of Eilat to deal with complex transnational collaborations that require a high level of expertise. This point is also important because this transformation almost went under the radar of the Israeli central and other local level actors. Eilat developed and implemented its own actions with little support from the Israeli central level and from Israeli ENGOs. This contrasts with other politically weak cities such as Ramle or more wealthy cities such as Rosh Ha'Ain, which, at the time of research, did not present (or did not want to present) steps to elevate their participation into other EU projects and actions addressing the climate crisis. This point raises another issue: It is likely that the understanding of the city's leadership achieved through investing in these projects and its leveraging of its participation in them enabled this change. In contrast, Kfar Saba already has experience with municipal leadership on, for example, renewable energy and sustainable planning, and had the resources for urban sustainability that resulted in the SUDEP project only contributing in a minor fashion to changes to its authoritative role in urban climate action in Israel.

Regarding civil society actors, data suggests that the EU's financial support to ENGOs assists them in maintaining their daily activities, but it is less evident that this support provided these organizations more authority in the field they were trying to promote. In other words, the EU's support is important to keep ENGOs active, but this support seems less relevant in positioning them as an authority in the field of climate change.

Innovation. As with authority, participation in EU projects enabled Eilat to step up technological innovation and, eventually, opened a door for the city to engage in innovative approaches to addressing urban climate and energy solutions. These new approaches are, for example, serving as a site of experimentation for tech innovation and finding ways to stay up-to-date and a relevant actor in transnational networks and platforms. In other words, granting a supportive environment for the city generated bigger circles of urban innovation and learning. Regarding the MoEP, Twinning projects presented technological innovation and new fields of expertise, with few further visible impacts. For ENGOs, there seem to be few contributions coming from the Union in terms of innovation and learning in their areas of expertise. One potential explanation for this situation is that the EU financial support is not bound to specific targets and goals that ENGOs must focus on. ENGOs have little reference point for learning innovative ideas and policies that derive directly from the EU. Instead, they need to find other sources of knowledge, sometimes with the help of mediators (see also in chapter 6).

Participation. This chapter shows that the niche-like ways Israeli actors engage with the EU binds participation elements. The technocratic nature of the Twinning project limits the engagements of other ministries or agencies. Other central level bodies may receive the outputs of the project (e.g., manuals) but the process itself is bound to pre-determined participants. The limited participation is also the case in interactions of the EU with the Israeli local level. The projects that were examined in this chapter did not show meaningful change in the ways Eilat and Kfar Saba engage with other Israeli actors from the Israeli governance system. It can be said even that Eilat 'leaped out' of the Israeli system and chose to engage with foreign actors at the expense of domestic ones. This pattern shows, however, signs of change since the late 2010s. In summary, the data in this chapter showed that EU projects contributed little to changes in how cities interact *within* the Israeli system.

Communication. There is little scaling up and down of the outputs derived from interactions between Israeli actors and the EU. During the time of this research, the Israeli central and even local authorities showed little awareness of the innovative projects in Eilat and the larger implications these had for the city. When asked about Eilat, interviewees from the Ministry of Energy and Infrastructure and the MoEP knew very little about the projects in the city. Likewise, these central level actors knew little about the Union's project in Kfar Saba. The limited involvement of the central level in such projects that incorporate exogenous knowledge misses the potential for broader learning from the practices and experiments that are tested in the city. (Although, this may have changed toward the early 2020s.) The extent to which outputs from Twinning projects such as new methodologies were disseminated within the MoEP and to other Israeli actors was not clearly distinguished.

Chapter 8: Synthesis and discussion

This study is meant to answer the following questions: In Israel, a country with a centralized political system that has reacted slowly to the climate crisis, how do foreign actors such as Germany and the EU influence (domestic) climate governance? And why does influence occur in certain forms and not others? The empirical chapters provided findings vis-à-vis these questions in terms of three streams of influence on Israeli actors: German public sector actors, German non-state actors, and the EU. The research was designed and conducted not with the aim to grasp the *entire* scope of German-Israeli and EU-Israeli interactions regarding the tackling of the climate crisis. Rather, this design aids to better understand important parts of these interactions. This is done by giving room to the interlinkages found between the streams of influence. This design assists in contributing to filling empirical and analytical gaps for the countries involved (including the EU), the types of interactions, and the analytical frameworks applied. Thus, this chapter first provides a synthesis of these findings, tailoring them to answer the research questions. The chapter then discusses findings against the analytical frameworks (policy transfer, orchestration, soft power, and polycentric governance), thereby bringing them closer to current conversations on climate governance. The third part of this chapter briefly summarizes the theoretical and empirical contributions of this study. Following that, the chapter discusses shortcomings of this study and suggests paths for future research. Finally, the chapter draws conclusions that place the findings of this work in a broader context.

8.1. Synthesis of empirical findings

This subsection provides an outlook that integrates key elements from all three empirical chapters.

8.1.1. Motivations of actors to initiate and to engage in knowledge transfer mechanisms

Germany and the EU share similar drivers for engaging in the Israeli system: a set of beliefs and self-images concerning the climate crisis, with two focal points. The first focal point is the self-perception held by Germany and the EU that, respectively, they *are* leading the way in addressing the climate crisis. This image is evident explicitly and implicitly in the ways Germany and the EU portray themselves when interacting with Israeli actors: actors with expertise and experience, and with a willingness to share this experience to societies that need it. This is portrayed through models and successful examples in the case of Germany. This image can also be seen with the investments made with various resources to prompt Israeli actors to recognize this role and learn from it. This self-image prevails alongside the economic and political interests of Germany and the EU in advancing climate action in Israel. But this study showed how the image, the portraying of one's own successful

example/s to others (i.e., Israelis) plays an important role in driving the EU and Germany to act in Israel as they do.

This is very evident regarding the city of Freiburg. The Heinrich Böll Stiftung (HBS), the Freiburg Future Lab (FFL), and to some extent the German Chamber of Commerce in Israel (AHK Israel) are using Freiburg to project an ideal-type example of how to address climate concerns. This study interprets this approach as a projection of how German actors *want* others to see Germany's success in tackling climate problems, at least at the local level. This image is then used as a soft form of influence that lays an attractive model to learn from: providing the best solution available in Germany, and what Germany can offer to others. All three German cities examined in this study (Freiburg, Berlin, and Leipzig) present a similar confidence in their respective ability to deliver their experience and expertise to Israeli partner cities and to Israeli actors in general.

The second point, which is intertwined with the first, concerns a deep-seated convention in Germany and the EU about the *need* to "go green."[121] Germany and the EU are operating at several levels and with several actors, and with diverse programs and channels of influence, out of the belief that reducing GHG emissions and endorsing sustainable patterns of production, consumption, and behavior as they are and will be exercised in Germany and the EU, are the right way for securing a stable future. This is visible, for example, in the coupling of climate crisis threats and national security concerns by Germany. And is also evident, for example, in the efforts the EU undertakes toward having Israeli actors to more closely follow *norms* and standards for determining how industry should operate, how public officials could improve their work, or how cities can improve their urban environments.

This sense of commitment, which is intertwined with a sense of leadership (or aspiration of leadership) seems less common, at least according to the data collected for this study, in the engagements of other countries, such as the United States of America (US), in Israel. This attitude of leadership and perception as to how things *should be*, is common to all German actors that were examined in this study. It shows how this view is rooted in both the public and private sectors, and by non-state actors with different agendas. This is a self-assurance that is fueled by climate policies and actions taken in these sectors and by these actors since, at least the 1990s. With this background, the political foundations are seen joining forces, de facto, with Freiburg or Berlin or even other cities, to provide examples of "German" models for energy, planning, and other emissions-related issue areas such as transportation and even waste management. The federal ministries contribute their resources to hosting Israeli actors and conveying their experience alongside their perspectives on how things

[121] This notion received even greater relevance after the outbreak of war in Ukraine in 2022, which dramatically shook Europe's and Germany's energy policies.

should be done. Even the private sector is teaming up with other German actors to provide the ways and solutions for businesses to address the "larger" problem. Operation across multiple sectors shows the systematic and mutual action that characterizes German actors when they approach Israel. The data shows that such a joint operation is made possible through the shared notions, values, and self-images and beliefs of German actors.

At the same time, there are economic and political interests for Israel, German actors and the EU to interact. For the EU, interactions mean engaging EU public and private actors in EU projects. For Germany, economic and political interests are coupled with the country's automatic support for Israel. Some of the findings show that Germany and the EU treat their knowledge as a "commodity" with great social and political value for Israel. Some of the interviewees claimed that in return, Israel can or should give Germany and the EU "a piece of" the Israeli high-tech "magic." For Germany, collaborations serve to help gain access to new technologies that have a potential to benefit Germany's efforts to improve its position in the emerging global tech competition as well as concerning smart solutions for combatting the climate crisis. At the local level, the three German cities mentioned use the relations with their Israeli partners much as they do any other partners: to elevate their domestic and global position, to anchor their role as experts and exporters of knowledge, and through that to contribute to the local economy and their political position in Germany and in transnational forums.

The limitations and problems in tackling climate concerns are incorporated by German actors to the experience they export to others. This is an element that is perceived by German actors as adding value to their approach: reflecting on past mistakes as a means and a proof of their strengths in addressing these concerns. This viewpoint is affirmed by Israeli recipients, as well, which in turn further grounds the positive image regarding the above-mentioned experience Germany claims to have.

This reflection, however, is absent in EU interactions with Israeli actors, which do not themselves reflect much on past-experience and continuous learning. Instead, these are project-based, solution-oriented relations that aim to bring Israeli actors closer to EU standards and, in doing so, closer to EU values and norms.

8.1.2. Knowledge transfer mechanisms of German actors and the EU, and their outputs

The study acknowledged the potential influence of other foreign actors or events, besides that of Germany and the EU, on Israeli actors vis-à-vis addressing problems related to the climate crisis (see chapter 1). Several Israeli interviewees indicated that they were influenced by things like "global trends" or "what happens in the world." This is an indication of general diffusion mechanisms that the Israeli system, much like other systems, experiences: actors in different countries during the same

timeframe or similar phases of policy formation adopt international norms or those of other countries' via diffusion processes (Jörgens, 2004).

In the Israeli case, for example, the 2015 Paris Agreement and, years later, the 2021 Glasgow Climate Conference (COP 26) drove the Israeli government to take more systematic approaches to tackle climate change than in previous years, for example, by reducing barriers and designating budgets (Tal, 2020b, 2021). The accession of Israel to the Organization for Economic Co-operation and Development (OECD) in 2010 equipped Israel with higher environmental regulations and standards than seen in previous years. There is no doubt that that accession opened the door for Israeli policy makers to learn through OECD functions about foreign jurisdictions. However, the OECD serve Israeli actors as a tool to garner knowledge concerning "common" or "verified" policy tools in other countries and comparative data, which serve as a basis for policy making.

This influence stands in contrast to what the EU and German stakeholders provide to groups of Israeli officials in various governmental ministries, cities, and civil society organizations. The findings point to the distinct position enjoyed by Germany and, albeit in a different form, by the EU in Israeli eyes. German actors were able to exercise their influence *because of their drive* to exert such an influence – unlike, for example, other European countries or the United States (US). It was only in the late 2010s that other European embassies in Israel made attempts to export their interests and concerns over the climate crisis to Israeli actors and to the Israeli public (e.g. Schuster, 2019). Yet by that time, the German actors were already deeply engaged with Israeli actors. Other foreign actors simply did not put the efforts and the resources into engaging Israeli actors around climate actions as did Germany, and as did the EU through its projects with Israeli actors.

8.1.2.1 The German federal level

The federal ministries in Germany that had the strongest continuous relations with Israeli actors, at least during the time of my research, were the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) and the Federal Foreign Office.[122] These ministries share similar drivers and goals when approaching Israeli actors (see subsection 8.1.1. in this chapter), but they differ from one another in their operations. The BMUV mostly operates on bilateral, direct paths that resemble policy transfer, while the Foreign Office prefers indirect modes of operation that resemble orchestrated relations. These approaches differ with regard to some aspects of their contribution to *changes in governance* (see below).

[122] Additional progress in the federal approach can be seen in the recent agreement between the Israeli Ministry of Energy and Infrastructure and the German Ministry of Economic Affairs and Climate Action (BMWK) to join forces to tackle the climate crisis and address energy issues. See https://www.gov.il/en/departments/news/press_270322 (Last accessed March 31, 2022.)

The BMUV operations developed into niches in the Israel Ministry of Environmental Protection (MoEP) and in the city of Tel Aviv-Yafo. Indirectly, BMUV officials contributed to disseminating knowledge to a large audience in Israel through indirect operations of the German political foundations. This is an important distinction because it suggests that bilateral, official, and direct operations seem to have less impact in Israel than sharing and spreading the experience of the BMUV through networks that German non-state actors establish and maintain. This is not to say that there is no meaningful or important contribution being made by the BMUV to bilateral relations. Rather, participating in networks and taking part in initiatives that include other German (or EU) stakeholders seem to have a bigger impact. The bilateral relations provide legitimacy for the MoEP to act and push for climate action within the Israeli system and especially within the central government. The legitimacy is expressed where evidence provided from Germany substantiates the MoEP's arguments and where these arguments find support by a strong ally of Israel. In other words, the bilateral relations between the BMUV and the MoEP contribute less to concrete climate actions and more to strengthening the position of the MoEP to approach and promote climate actions and assist in grounding innovative approaches and ideas.

In parallel fashion, these relations strengthen the role of the BMUV as a knowledge-authority. The BMUV is an important source of knowledge. This position serves the ministry's own goals and the goals of the German Federal Government to export Germany's experience in addressing the climate crisis and in strengthening its leadership role. However, because of the weak political position of the MoEP, this impact is limited. Bilateral relations have a *supporting element* to the impact in climate action by further engaging Israeli actors with ideas and models from Germany, and with the creation of networks of like-minded participants.

For the city of Tel Aviv-Yafo, the bilateral agreement with the BMUV provided material support for the experimentation with and innovation of green building retrofit. It is questionable whether from these relations the city gained, or even wanted to gain, benefits such as legitimacy and establishing its position in Israel in the context of addressing climate problems. The project itself upgrades the city's position in Germany and globally, adding to Tel Aviv-Yafo's city image worldwide. This image, however, is only partly related to tackling climate problems. The green building elements that are part of the project are not highlighted and are less mobilized to achieve or add to Tel Aviv-Yafo's climate efforts. These efforts are invested in other initiatives that only partly incorporate bilateral relations with German cities.

The work of the Federal Foreign Office is indirect. While it prepares and assists in organizing bilateral (direct) official governmental meetings between Germany and Israel, it also operates to convey climate actions in Israel in indirect, orchestrated forms. These operations promote certain

knowledge items and concepts that eventually took root in Israel: a notable example is the link between the climate crisis and national security concerns. The work of the Foreign Office helped to ground the notion and the need to tackle the climate crisis, all the while providing material and ideational support for the Israeli intermediaries that are engaged in this endeavor. While in this case Germany was not serving as the model to draw from, the country nevertheless was using Israeli intermediaries (sometimes added by German intermediaries) to advocate the link between climate concerns and national security among the Israeli elite and decision-making forums in the country. As with the BMUV, the Foreign Office campaigned in Israel for the importance of what Germany *perceives* to be important – the climate crisis and its link to national security. In a similar manner, the Foreign Office's actions also help to ground Germany's role as "climate protector" and as a leader in Israeli eyes, even if not, perhaps, in the eyes of the international community.

The operations of these ministries show that they enjoy greater influence when they, as actors, and their actions are linked with other actors, in both Germany and in Israel. The BMUV was able to present its agendas and policies to a broad array of Israeli actors in a decades-long period, in which delegations of and learning excursions by Israeli ENGOs and German non-state actors were organized. These learning schemes were part of networks that were developed by these non-state actors or out of their operations. This process has had an effect *over time*. The Foreign Office and the political foundations present *steering* functions that shape approaches to climate concerns in Israel. Steering of this kind does not, however, characterize the work of the BMUV. It means that indirect, orchestrated forms of operations promote federal agendas more substantially than bilateral, official paths of knowledge transfer. Likewise, the potential for influencing Israeli climate action and Israeli actors grows in these indirect forms.

8.1.2.2. The German local level

The mechanism that was depicted in the previous section is less clear at the city level. The findings point to different outputs and implications for Israeli cities in their bilateral relations with German cities. Tel Aviv-Yafo presents the most organized and continuous capabilities for collaborating with Berlin and Freiburg. These collaborations take place between high and medium level officials, and they receive political backup from mayors on both sides. The collaborations enable Tel Aviv-Yafo to add to its "knowledge basket" a greater understanding of different paths to tackle the climate crisis. However, the collaborations are not translated into concrete policies, but rather serve Tel Aviv-Yafo's officials to advance certain ideas concerning urban climate action. The knowledge from Berlin and Freiburg serves as a point of reference: What can be done, and how to approach that? Bilateral relations are used for legitimizing certain ideas and actions and for grounding the global perspectives that Tel Aviv-Yafo nourishes.

Similar findings appear when examining collaborations between Leipzig and Herzliya, and between Mülheim and Kfar Saba. Bilateral relations are used in Israeli cities for gaining legitimization for climate-related actions and adding more sources of inspiration to the urban "knowledge pool." But these relations have little impact in terms of policy formation and climate action that substantially changes dominant approaches to climate concerns. Instead, the work of Israeli ENGOs and the central ministries can bring more meaningful steps to be taken in Israeli cities, for example in easing regulatory constraints on renewable energy. With that, the influence of exogenous knowledge coming from the city level did not meet the potential that was highlighted in previous studies such as Betsill and Bulkeley (2004, 2006) for aiding climate action at the municipal level in the Israeli cities under focus here.

8.1.2.3. German non-state actors

Several elements distinguish German non-state actors from German state actors, in their operations in Israel and in the outcomes of these operations. The AHK presents the actor with the most intrinsic approach to knowledge transfer. Other foundations from the German private sector, such as the Foundation of German Business (Stiftung der Deutschen Wirtschaft [SDW]) or the Bosch Foundation, seem to have a certain ideology and values that reflect political affiliations, economic tendencies, and the worldviews of their respective founders (as, for example, with the SDW's leaning toward support for employers and liberal market ideology). The AHK concerns itself with advocating and promoting benefits for German businesses in Israel, regardless of ideology and tendency. By contrast, the political foundations, the Freiburg Future Lab (FFL), the German cities, and the federal ministries all present more solid worldviews that drive their actions and approaches to relations with Israeli partners.

Several differences stand out when observing the operations of the political foundations. First, the Konrad Adenauer Stiftung (KAS) adapts its messages to the Israeli audience in a way similar to the Foreign Office. HBS and the other non-state actors, and to some extent the cities that were examined, present more of their "own" knowledge and agendas, which they attempt to insert and root in Israel. Second, the political foundations differ in their respective target groups but are similar in their ways of operating. Both KAS and HBS operate in ways that are very similar to orchestration. This was already noted by Shefer (2018) concerning the HBS, and this study revalidates the point as regards KAS. The foundations are driven by their agendas to steer a change in Israel's climate response and to position Germany at the forefront of these efforts. The goals of the foundations – as orchestrators – is to influence Israeli targets: Israeli decision-makers and, to lesser extent, segments in the Israeli public. The Israeli ENGOs that work with the foundations are thus the intermediaries: they share similar goals of influencing Israeli decision-makers over the climate issue. The targets, however, vary in terms of their potential to exert influence. KAS targeted Israeli military, economic and political elites, and the

foundation also addressed a key concern in Israeli national interests. HBS targeted Israeli central level actors such as the Ministry of Energy and Infrastructure and the MoEP, cities and other ENGOs. With that, the foundations complement each other in the sense of their targeting different audiences that, ultimately, need to collaborate to address the climate crisis in the Israeli context.

Through this work, the foundations and, especially, HBS have made a substantial contribution to the creation of new *climate coalitions* in Israel. These coalitions are comprised of the intermediaries and targets. One major development, as this study interprets from the findings, is the role that evolved for the foundations themselves: as legitimate actors operating on their own behalf in Israeli decision-making circles. In addition, it very well may be that the BMUV can also be regarded as a new actor in the Israeli system through its engagements in climate coalitions and given its position in terms of knowledge and experience in Israeli eyes. This development does not mean that other actors in Israel were marginalized or thrown out of the climate "game," but rather that the *pool of actors widened*. Hence, the pool currently includes new Israeli actors (from ENGOs, cities, the central government, the private sector) *and also* from the foundations and, potentially, the BMUV, as well. This development is less clear in the case of other federal ministries such as the BMWK or even the Foreign Office.

The other non-state actors that were examined in this study – the FFL and the AHK – cannot be regarded as orchestrators in the same way. These actors lean toward policy transfer mechanisms, i.e., direct forms of transfer. The AHK and the FFL work with Israeli actors, and they share similar goals and values as regards the climate crisis and, particularly, the need and will to influence Israeli climate actions. However, these organizations are lacking the steering element and the interdependence that are crucial for orchestration.

8.1.2.4. The German "system"

Several elements are common to the work performed at the German state and non-state levels. First, all actors that were examined in this study directed most of their focus toward various degrees and modes of learning through on-site tours, excursions, lectures, seminars, and research. By and large, these engagements focused more on learning and on networking and less on practices such as developing pilot projects and implementing ideas that emerged from experiences from, inter alia, study tours. In some instances, German actors provided small funds for pilot projects, but their main objectives remained the transfer of knowledge. This contrasts with the EU, which focused mainly on the transfer and development of knowledge in the form of on-site projects.

Another element common to German actors (except the BMUV) is the modest financial support they provide to Israeli actors. KAS, HBS and the Foreign Office have all provided small amounts of money for the operation of Israeli actors. Tours, seminars, and research do not require large sums of support and investments, but they proved to have a long-term effect on Israeli actors to various

extent. This suggests that the *amount* of financial support in orchestrated relations or in bilateral relations that lean toward policy transfer has little significance for gaining influence through knowledge. The small sums of money were sufficient for Israeli actors to acquire knowledge.

One of the greatest strengths of the operations of German actors that emerges from the findings is the interlinkages between actors. The Foreign Office joins hands with the KAS and the HBS (through the German Embassy), and representatives from the BMUV, Freiburg and Berlin contribute their knowledge through learning platforms provided by non-state actors. Therefore, it is safe to argue that the work of German actors presents a loose network of officials and professionals that work jointly to push for climate action based on the German experience. This network coordinates itself to reach this goal, though it is not structured and steered by a central or single authority. The Israeli recipients are sometimes the target of these networks and sometimes part of them. Lastly, while this study did not measure the effectiveness of the outcomes of the different types of interactions, the accumulation of the data indicates that the BMUV is the actor with the "weakest" output in terms of influence on climate governance, and the HBS seems to be the actor with "most" output for the system of climate governance in Israel.

8.1.2.5. The EU operations vis-à-vis the German system

EU engagements involve large sums of money due to their objectives, for example supporting pilot projects, large-scale research projects and experiments. An element common to the EU work and the operations of German actors is that Israeli actors portray and use them as quality marks for their own purposes. Establishing and maintaining contacts with Germany or also with the EU provides legitimacy for Israeli actors and a sort of guarantee that the ideas behind the initiatives are solid and reliable. The alleged neutrality of the climate issue has allowed Israeli actors to advocate for their agendas concerning the climate crisis, while highlighting German experience in this context.

The EU's Twinning projects add to the MoEP's professionalization, which has less direct impact on the MoEP's climate actions and, subsequently, on the Israeli government's climate actions. The Twinning outputs contribute, however, to the *overall efforts* by the Israeli government to tackle emissions reduction in different sectors (e.g., industry and waste management). These efforts are no match for more direct forms of emissions reduction that are needed in Israel, such as increasing renewable energy and reducing emissions from transportation.

The engagement of the BMUV in the first and second Twinning projects, and the hopes held by the BMUV that it will win the third Twinning, as well, highlight once more, on the one hand, the strong influence Germany retains within the MoEP, and on the other hand, a tendency in Israel to lean toward Germany in environmental and climate-related issues. In other words, the EU platform serves

as an important additional channel to strengthen the bilateral relations between the MoEP and the BMUV.

8.1.3. Obstacles to interactions

The systematic and ideologically unified approach German actors demonstrate when collaborating with their Israeli partners shows a lack of substantial *political* barriers that German actors face in Germany for this endeavor. A lack of meaningful political barriers also prevails on the recipient, Israeli side. In other words, this study did not find clear evidence of inherent, *political* obstacles for engaging in mechanisms and platforms for the transfer and exchange of knowledge in the German-Israeli context. This means that exogenous knowledge over the climate crisis at the time of this research did not face intended obstacles presented by the Israeli central level and by other powerful actors. A similar situation can be seen in engagements of Israeli actors with the EU. There was no clear evidence that projects in Israel funded by the EU encountered political resistance by other Israeli actors. In other words, these issues go under the Israeli political radar and are not politically contested.

However, keeping these initiatives at a safe distance from political debates also means maintaining these relations in their niches and bound within climate-centered or, at least, climate-related coalitions. It may very well be that this situation hardens the involved actors to the knowledge gained, be it scaled upward, downward, or horizontally to other governance levels, and that this situation also prevents this knowledge from growing into large scale projects or to register greater impacts. The limited political obstacles to interactions point to the conflicting inherent elements that are found in this study: On the one hand, there are larger impacts on Israeli actors' actions on climate problems and on the climate governance system that can be linked to the interventions of Germany and the EU. This is amplified in growing circles of Israeli actors who are sensitive to the cause (climate coalitions). On the other hand, some of these circles and their actions remain at the niche level, for example in cities.

This resolution is significant because it shows that 1) other barriers and problems are potentially hindering knowledge transfer processes, at least in the Israeli context; and, 2) climate and sustainability concerns are too neutral of an issue in Israel as compared to other issues that are advocated by Germany and the EU, such as human rights and democracy, which often raise hostility in Israel. As this study interprets it, as a neutral issue, they cannot in turn receive public attention sufficient for breaking out of their niches.

Another problem that emerged in these findings relates to the dissemination of knowledge gained within the Israeli system: scaling (climate) concerns at the central level itself and the relations between the central and local levels. This problem relates to the lack of knowledge and insufficient understanding among parts of local and central level actors in Israel regarding the importance of

tackling the climate crisis and also regarding implementation of policy that is developed out of the exposure to new knowledge. At least until the late 2010s, the lack of knowledge was fueled by a lack of interest, and vice versa. It shows the need for mediators and intermediaries. In Israel, this role was taken by ENGOs in orchestrated or more direct forms of knowledge transfer mechanisms. Knowledge is circulated mainly informally, between colleagues, and less in orderly or structured paths. However, more scaling needs to take place between the central and local levels, and within these levels of governance themselves. It may very well be that a more structured form of both scaling and disseminating knowledge from abroad, alongside what the ENGOs are doing, would enable better implementation of that knowledge. In addition, the findings strengthen the notion that local level actors and ENGOs face a lack of structured, and clear policy and strategy for tackling the climate crisis by the central level (see also Gorni, 2021 and Tal, 2020). In turn, a lack of clear strategy affects, the potential of exogenous knowledge to be integrated in this strategy. For example, the Israeli ENGO Greencourse pointed to the problematic gap between official governmental declarations and governmental approvals of development of, for example, new fossil fuel based power plants (Meirson, 2020).

Exogenous knowledge is encountering a system that is still not decisive about climate policy and regulations. There is a need to strengthen the political and legal framework to tackle the climate crisis in Israel. The OECD stresses the need of Israel to "enshrine the vision and targets of its long-term low emissions development strategy (LT-LEDS) in national legislation, *once developed and agreed*" (emphasis added) (OECD, 2020).

With the EU, the problem does not seem to lie in finding solutions or developing a program, policy or technology in a city or at the MoEP. Rather, the problem lies in scaling horizontally and vertically the notions and ideas and perspectives that are rooted in these programs, policies or technologies. For example, the gains made by Eilat through engaging in EU projects were not circulated and highlighted in municipal- or central-level forums in Israel. Kfar Saba used its collaborations to acquire something for the city, but little was done to introduce changes by the city on its own accord. EU projects with Israeli cities seem to take place in parallel to policies and practices that are driven or suggested by the Israeli central level to cities. The potential to enhance professionalization, the power to shape things through new knowledge, seems missing because of lacking central-local relations.

Nevertheless, the study showed that in several instances, knowledge that originated in Germany "traveled" with agents of change / members of the *climate coalitions* to their new positions. This showcases the potential of overcoming inner barriers in the Israeli system. However, it also raises

a new concern: the importance and ability to target these types of agents of change that could implement knowledge and translate it further horizontally and vertically within Israeli networks.

Also, regarding the inner-systems barrier, one key issue was unique to the EU system: the Union's organizational framework for operating knowledge transfers and cooperation. Simply put, the EU system was found to be too complex to many Israeli actors from both governmental and non-state sectors. This element deters some actors, especially those who are not close or part of climate coalitions such as mayors of some cities. Navigating this system requires knowledgeable designated officials or consultants, for which cities need to allocate budgets and invest resources. Here, too, emerges a paradox: the lack of knowledge in cities, for example, constrains them from seeking and investing to win EU support, which, in turn, would aim to transfer new knowledge to these cities.

There is another barrier that relates to the Israeli local level. Forum 15 is a key point of learning for Israeli cities, yet at the time of research, it had hardly been targeted *directly* by German actors and EU programs regarding the climate crisis. German actors that were examined here seem to prefer to work with other ENGOs. This is surprising, considering that the Forum was involved in climate initiatives and especially in green building in Israel. Not only that, but the Forum is a platform for disseminating knowledge (to the Israeli local level), and the Forum enjoys access to and legitimacy among other governance levels in the country. A possible interpretation of this situation is that insufficient personal ties limit these sides to collaborating on a more regular basis. It may be that officials and staff from both sides simply prefer to engage with other actors.

8.1.4. Insights into governance outcomes

This sub-section examines these findings in light of the governance changes that were discussed at the end of each empirical chapter (section 2.5). The mechanisms depicted above and the obstacles they are facing are jointly portraying a picture of the changes that occurred in the Israeli climate governance system following the relationships of Israeli actors with Germany and the EU. The operations of the German actors and the EU are examined against changes in (Israeli) actors' positions, responsibilities and actions concerning the climate crisis.

The findings show that in practice, there is a relatively small group of Israeli actors that is engaged with the EU and German actors *directly*. But this small group influences other actors in Israel to various extents. Accordingly, there is an accumulated exchange and transfer of knowledge in a "messy" and complex system of domestic and foreign actors that eventually contribute to pushing and also to partially realizing climate ideas in an Israeli context. This knowledge was recognized by most of the Israeli partners who were approached for this research project as being crucial for gaining the legitimacy to address climate concerns in Israel, to enhance participation, to put ideas into action, and to mobilize others to act.

The findings answer the research questions of this study and the assumptions that derived from the analytical frameworks: It is the accumulation of direct and indirect learning mechanisms and diffusion processes, and influencing, that together provide a wide set of Israeli actors the knowledge and the perspectives to address the climate crisis in the Israeli context. These mechanisms are steered and influenced by German actors and also, to a lesser degree, by the EU. However, some of these operations remain restricted to niches, while others managed to reach powerful actors in Israel. All in all, the German actors and the EU provided an infrastructure for Israeli actors to operate concerning the climate crisis. This infrastructure provided some actors – especially ENGOs – with an ability to influence other actors. Other parts of Israeli governance – ministries and cities – were shown to be less impacted by Germany and the EU.

The accumulation of knowledge is impactful in two ways: 1) Each *"unit"* is developing climate policy, action or a collaborative approach with other actors to advance such actions. Then, 2) they together create a cadre of like-minded people who are either part of climate coalitions or engage with members of these coalitions, which in turn, is translated into multiple forces that drive climate action. This relates to the creation or support of agency functions – either as a city, an ENGO or an individual pushing for a change within a city or a ministry. The importance of the knowledge gained from Germany and the EU, in terms of governance, seems to lie in its capacity to enable larger audiences in Israel, stakeholders from across the system of governance, to become engaged in climate action and to become exposed, in some instances, for the first time, to concepts related to climate change and to the necessities and possibilities of addressing it. This is not a matter of technology or concrete policy, but rather one of allowing ideas to take root in and grow within the Israeli system, a matter of maintaining and attempting to spread those ideas in the Israeli system.

In recent years, the Israeli local level showed a readiness to address elements concerning the climate crisis. Recent calls for improving the involvement of the local level in climate action point to the need for the central level to enable such action (Pines-Paz & Parnass, 2022). The involvement of local authorities in Israel in climate initiatives that were organized or supported by foreign actor show, however, a modest contribution to advance climate actions at the local level. In turn, this modest contribution has implications for the position of local authorities in climate governance arrangements in Israel. Eilat provides a unique case in the Israeli context concerning EU operations in Israel and to some extent concerning German operations, as well. Kfar Saba and Tel Aviv-Yafo, as pioneer cities and, importantly, economically established cities, compared to many other cities, did not need a foreign platform to elevate their position within the Israeli system or to improve their conditions. By contrast, Eilat needed that platform, but it managed, unlike other Israeli cities, to utilize EU projects toward making a substantial shift in its capabilities and potential for autonomous action. The other

Israeli cities that were engaged in EU projects and were excluded from this research only strengthen this point. These cities, even wealthy ones, rarely took advantage of the opportunities offered by the EU beyond the designated project itself. What this shows us is that using these platforms can be a leverage for creating more urban political capabilities even under the constraints of a centralized political system. Like Eilat, other cities could do so as well if they chose too. It is therefore more an issue of local politics and political preferences of the municipality than of constraints or an inability to act. Kfar Saba presents its own distinct story, as well. On the one hand, it is a pioneer Israeli city with several engagements with the EU and Germany, but these engagements do not run continuously as, for example, those run by Tel Aviv-Yafo.

The other bilateral relations involving Israel and its engagements in EU projects have moderate importance and potential impact in the eyes of the Israeli officials who were approached for this study. The engagements are not utilized to introduce substantial changes, but are rather a complementary tool to acquire more experience and to establish expertise in the Israeli realm to address climate-related problems.

Innovation also indicates a potential change in governance arrangements. Eilat presents a mix of policy, technology and ideational innovation that can be linked to the support it received from the EU. The SUDEP project enabled Eilat to experiment with technology and policies that address climate-change challenges. This project enabled other projects. By embracing technological innovation, innovative paths were opened for the city to gain more knowledge, international recognition, and political autonomy in addressing urban climate challenges and other sustainability-related actions. By contrast, Kfar Saba did not rely on the EU to develop their innovative approaches to climate, energy and sustainability to the same extent as Eilat did. However, the third Israeli city that this study examined, Tel Aviv-Yafo, elevated the relations with its German city partners and the participation of its own officials in learning initiatives and professional networks for furthering innovative ideas and approaches, and experimenting with low-carbon initiatives and technologies. With the MoEP, both the EU and the BMUV did not seem to drive or contribute to the development of innovative policies and approaches concerning climate change. Rather, Twinning led to a development of regulations that fit EU standards but it is questionable whether these outputs could be translated to other fields or problems; and bilateral relations seem to have less impact on developing innovation at the MoEP. What this situation may suggest is that innovation depends more on the recipient rather than on the exporter: a sender may try to push for innovative ideas and solutions, but it is up to the one receiving those to translate them as a means to innovation on its own terms. The relations themselves and the designed projects can enable innovation if the recipient is ready and invests in these new paths.

What is also intriguing in the case of EU projects with Israeli cities is the lack of interest and involvement coming from the Israeli central level, and sometimes with little knowledge about them. On the one hand, this situation signals that such projects are not regarded by the Israeli central level as a meaningful factor for addressing climate concerns in Israeli cities. On the other hand, it also signals that the central level provides, whether intentionally or not, a lot of freedom for experimentation and learning at the local level. The lack of scaling of this information and of the outputs from these EU projects to the central level underscores this aspect.

Another issue that arises from the finding pertains to finance. On the one hand, the case of Eilat shows that large sums of money have a long-term impact if the city can manage to wisely leverage its participation in funded projects such as those the EU provides. The funding Kfar Saba received from the EU seems less relevant because this project was not a cornerstone of its climate and sustainability initiatives. For other Israeli cities that took part in EU projects but were not analyzed here (see chapter 3), EU funding seems less relevant: some of these cities are wealthy, while others are poor, but cities in either case seem not to have utilized these projects for their benefits. Funding by the Twinning projects contributed to the professionalization of the MoEP, but these projects were not linked directly to the ministry's climate efforts. Lastly, Israeli ENGOs managed to take small sums of money and convert them into meaningful action that have an impact on growing circles of influence. Based on these observations, it can be carefully said that collaborations and their impacts are less an issue of the amount of money that is invested in the project, and more an issue of the readiness and capability of the officials and staff involved to take the opportunity and build on it in the medium and long run.

8.1.4.1. Governance outcomes vis-à-vis ideas and perceptions

While the perspectives on climate concerns seem to have changed in Israel with the significant involvement and initiative of German actors and, to some extent, also through EU funding, the change of perspectives over energy is more ambiguous. The direct and indirect types of interactions that are operated by Germany and the EU have not changed dramatically the way Israeli decision makers address the country's energy challenges. These interactions provided models, inspirations and examples of what can be done, which then led to action by some actors in Israel. But reaching 30% renewables, for example, or easing regulations and removing regulatory barriers for PVs in Israel cannot be attributed to the influence exercised by German actors, or to Israeli intermediaries. German partners and their Israeli intermediaries did *help* to legitimize these moves and to mainstream them among decision making circles. They set the ground for concrete policies and regulations on energy. Interactions helped to spread the notion and potentials of renewable energies through Israeli ENGOs; these then managed to open the door to this issue. Change of business models and regulations, more

decentralization of energy systems or trying to be forerunners in addressing energy concerns in the Israeli system (Scholten, 2018, pp. 19–22) are actions and capabilities that were not developed as a result of interacting with Germany. They did, however, enjoy the backwind and knowledge needed to realize them in the Israeli context. For example, using natural gas in Israel was a contested political issue to which the central government used its leverage and powers to execute its decisions against a small but loud opposition. It was important enough for the central Israeli level to pursue its natural gas policy, amid political and professional objections. This was not the case with "the climate," to which the central Israeli level has devoted little attention and resources, compared to other issues on its agenda, at least up until the very late 2010s. Protests for climate actions were few and media coverage was sparse. However, as this study observed, the neglect of climate concerns in Israel was actually of assistance to foreign actors in establishing coalitions that are dedicated to the subject and in providing knowledge that eventually allowed climate concerns to float in a limited way up to the public sphere in Israel.

Another angle that the findings shed light on is the change of perception in the target audience. Here, the role of public diplomacy comes together with the orchestrated relations as a soft mechanism of influence exerted by German actors. However, while the German actors and the EU managed to reach certain types of target audiences such as ENGOs and ministries, large segments in the Israeli society were not targeted by the former (at least by the end of the 2010s). For example, and to the best knowledge of the author in the time of this research, the German embassy and the political foundations did not act to influence the Israeli mainstream media to address climate change and/or other sustainability concerns. Designated action of this form was first commenced in 2021 by Israeli actors.[123] In general, however, the Israeli mainstream media is still refraining from covering the climate crisis and its impacts on Israel on a regular basis, let alone providing adequate contexts (Luvitch, 2022). When the German actors and the EU approached poor or marginalized communities in Israel such as ultra-orthodox Jews and Arab communities, the focus was different; it was directed, for example, toward the empowerment of women, waste management and taking minor steps in energy efficiency. Engaging these communities was accomplished through orchestrated action undertaken by the climate coalitions that emerged around the German foundations. The limited outreach of/ by the German actors and the EU strengthens the finding of this research concerning niche-level outcomes and the limitation of facilitating these niches.

This change of perception has grown among other Israeli ENGOs and other actors. For example, Adam Teva V'Din (ATAD), one of the most prominent Israeli ENGOs, put less focus on addressing climate change in its work than Heschel, Life and Environment, ILGBC, and the Israel Energy

[123] See https://www.tau.ac.il/news/climate-journalism (Last accessed March 29, 2022.)

Forum, at least until the late 2010s. This may point to the limitation of the influence and dissemination of knowledge by climate coalitions powered by German actors or EU support; and at the same time, it may also point to the power of these coalitions: they *contributed* to spreading notions regarding the climate crisis and also to a sense for the need to address it to the point that other ENGOs joined the cause. Similarly, Greenpeace Israel has worked parallel to the climate coalitions that emerged from the orchestrated and direct efforts of German actors and, partly, EU projects. The work done by Greenpeace has had an impact on media and decision makers in Israel, especially in terms of renewable energy. What seems to be the main difference is the way of operation: the orchestrated and direct interventions by German actors and the EU aimed with their engagements and certain ideas to influence *decision-makers'* circles. However, the work of Greenpeace aimed to raise awareness through resistance and a confrontational approach, focusing on collaborations with the private sector, and less on those with governmental actors. Importantly, Greenpeace Israel enjoys the backwind of its global reputation, unlike other Israeli ENGOs – a point which can explain the need for ENGOs to collaborate with German and EU actors.

The emergence of the climate conversation among other Israeli non-state actors also deserves attention. As mentioned before, addressing climate change came to Israeli ENGOs (those not included in chapter 6) in the late 2010s. At that time, other non-state actors such as think tanks and research institutes began to set their focus on climate concerns in the Israeli context to make an impact on decision makers. These actors, however, have weak connections to German actors and the EU. For example, the highly renowned Israel Democracy Institute (IDI) has started to initiate reports and events that address climate issues in Israel from various perspectives, such as labor and market mechanisms (Aviram-Nitzan & Govrin, 2021) and high-profile events.[124] Similarly, the Israeli labor movement's think tank, the Berl Katznelson Foundation, has started to address the climate crisis in alignment of the movement's values and ideology (e.g., marginalized populations).[125]

There is an additional angle on the change in perspective that relates to the central level: the Israeli central government and the parliament. An example of changed perception among central government actors can be seen with the publication of a guide in January 2022 by the Ministry of Interior, helping local authorities to address the climate crisis (Ronen & Kimhi, 2022). The guide was a joint venture of the Ministry of Interior, the MoEP, and the Ministry of Energy and Infrastructure. The sources of information that formed this guide vary, and it hardly draws on models and examples from abroad. The Ministry of Energy and Infrastructure established in the late 2010s a designated unit for "sustainable energy" that focuses on renewable energy; one of its main goals is to incorporate the

[124] https://www.idi.org.il/hurvitz/2021/ (Last accessed March 10, 2022.)
[125] See e.g. https://www.facebook.com/kerenberl/posts/2033791496720356?locale=hi_IN (Last accessed March 29, 2022.)

local level into this process. This move indicates a shift in the ministry's view of the ways to reach emissions reduction and the drive for climate action. The people who oversaw this publication and the head of the new unit were key figures in the orchestrated climate coalitions that were formed during the 2010s in Israel. The presence of these key people in these positions contribute to moves of the kind depicted here that provide a change of perception in the ministries. On the other hand, such an output drew criticism as being too general, as it refrains from addressing a core aspect that could accelerate local climate action: the allocation of resources to local authorities for that purpose (Ga'aton, 2022). Here, the barrier or drawbacks of orchestrated action could be seen: the providing of ideas and legitimacy for other Israeli actors, but with limited contribution to practical means for realizing them.

This is perplexing because of the contradiction between the central government's statements and goals and the steps taken on the ground. The country makes statements that sound bold (compared to its past statements) regarding its goals for emissions reduction, its aims to expand renewable energy and to deploy e-mobility on a large scale. The last two prime ministers – Binyamin Netanyahu and Naftali Bennett - declared ambitious goals and steps to reduce emissions and reach carbon neutrality by 2050 (Wolfson, 2020a). The previous MoEP minister declared in December 2020 an initiative to initiate green investments in the country's banking system (Ministry of Environmental Protection, 2020b). And the country joined the 2021 European and American initiative to reduce methane emissions by 30% by 2030 (Surkes, 2021). These actions signal a change in focus, perception, and action at the very heart of decision-making processes.

However, these changes are confronted with realities and actions for which the same government that issues bold statements is responsible. The country approves the construction of new power plants that will use fossil fuels (natural gas) (Liven, 2022). The country also aims to export natural gas to Europe and neighboring countries, thus making natural gas a key resource in its economy. It was found that Israel's goals for methane reduction do not match its real emissions, making it harder for the country to reach its goals in this field (Surkes, 2021). This hints to what have already been stressed in this study concerning the lack of a coherent path and strategy for Israel's climate policy. What are or will be its priorities for realizing this path?

8.1.4.2. Problems concerning governance outcomes

A key concern that emerges from the findings regarding German public and non-state actors is "What next"? What will the succeeding stages of acquiring knowledge from and through German actors bring with them? The main problem seems to be the *translation and concretization* of this knowledge into actions in the domestic (Israeli) context. The findings point to drawbacks in the areas of inspiration, innovation and emulation. For example, there are few attempts to assess and verify the

implementation or steps taken toward the initiation of action, following visits by Israeli actors to German sites, seminars and workshops. While the projects that the EU or German non-state actors fund undergo verification and assessment procedures, the tours, visits, workshops, and similar learning platforms receive little assessment by, especially, the Israeli actors that are involved in them. This adds up to a lack of influence on the realization of exogenous knowledge by Israeli actors.

The paths in which the EU contributed to changes in Israeli climate governance remain ambiguous. The EU can be regarded as a meaningful factor that contributed to changes in Israeli climate governance. The Union supports various initiatives at the local level that were aimed to enhance the ability of subnational actors to address the climate crisis, parallel to the central level's actions. These initiatives, however, entailed little power to change the situation of the cities significantly – except for the case of Eilat. Likewise, the Twinning project did not change the role and position of the MoEP substantially in terms of climate action and sustainability in general. This study interprets the data as showing that the political foundations and the Foreign Office were those that enabled a more substantial shift in the MoEP. On the other hand, the financial support of the EU to Israeli ENGOs enabled these organizations to pursue their goals. However, it is not clear that this support elevated these ENGOs or put them in the forefront of climate action in Israel. These outcomes seem to have developed more out of the involvement of the German political foundations and the Foreign Office; both of these entail ideational dimensions that, as this study interprets, have a meaningful contribution to these ENGOs. The position of the EU contrasts to some respect with studies such as Buzogány's (2018), that in Mediterranean countries, local NGOs that are working with the EU are becoming translators of the latter rules, and they overview or supervise the implementation of these rules. The position of the EU in this study also contrasts to its work with Israeli NGOs that focus on promoting peace, democracy and human rights in Israel, which receive substantial support from the Union (Steinberg, 2016).

The learning processes showed limited *systematic and/or continuous* integration in the high levels of Israeli decision-making circles. This was despite the platforms provided by political foundations, the active exposure of central level actors to climate concerns and to German models for how to tackle those problems, and the bilateral engagements between the ministries and the leading city (Tel Aviv-Yafo). The notions that foreign actors developed together with others, for example the climate coalitions, seemed to bypass members of parliament and the top positions in ministries. Many of these actors still show little interest in climate concerns. For example, the State Comptroller of Israel published in 2021 an alarming report on the country's near-zero readiness for the climate crisis, pointing to the negligence of the central level of the issue since the early 2010s (*National Climate Action by the Government of Israel*, 2021). A poll among members of parliament (MPs) in March 2022

found that only 37% of them agreed that the climate crisis is a result of human action (Gorni, 2022).[126] Israel lacks adequate adaptation measures to meet probable climate impacts (Yaron, 2022a). This information on the Israeli central level shows that, by and large, climate concerns are only slowly penetrating the top level of politics in Israel and that the influence of German stakeholders and the EU remained weak.

Lastly, transportation emerges as a key problem that is not sufficiently treated in the knowledge transfer mechanisms that were depicted in this study. There are designated projects on transportation such as the EU's smart mobility experiments in Tel Aviv-Yafo,[127] and sustainable transportation is part of the tours and other learning platforms that German actors are offering Israeli partners. However, innovation, experimentation and authority are missing altogether in addressing transportation and its link to climate problems. One reason for that is what appears to be the minimal engagement of the Israeli Ministry of Transportation and its German partner ministry (the Federal Ministry for Digital and Transport [BMDV]) in knowledge transfer mechanisms. The lack of integration between climate and transportation and between planning and transportation was highlighted in knowledge transfer mechanisms between Germany and Israel, and in those between the EU and Israel as well. In practice, however, these mechanisms saw little in the way of participation and inclusion of transportation officials and professionals from the Israeli side.

8.2. Discussion: Examining the findings against the analytical concepts

This section positions the abovementioned key findings against the analytical framework of this study (chapter 2). With that, this section confirms, challenges or develops aspects that were highlighted in previous research, and also identifies some of the main contributions of this study to the literature.

8.2.1. Insights into polycentric climate governance

One of the main innovative elements that this study aimed to achieve is the examination of complex, "messy" settings where several foreign actors engage with several domestic actors in the latter's (domestic) governance arrangements. In such a setting, the engagements enabled new actors to gain more power and authority over an issue area, i.e., one in which the climate crisis is addressed, and to mobilize other actors for that cause. These developments were found to be more impactful when they are done indirectly, when actors from different governance levels were operating together, in a network-like approach. The other forms of engagement, most of them in arrangements of bilateral

[126] The rest of the MPs considered this option with a slight or moderate degree of agreement; more than a third of the MPs did not answer the questions at all, which might point to the weak interest they have in this issue. See Gorni (2022).

[127] https://civitas.eu/resources/final-project-brochure-2move2

cooperation between actors from similar governance levels, are found to have moderate impact in terms of governance arrangements. This is also true in the exceptional case of bilateral cooperation between the German federal level and an Israeli municipality.

8.2.1.1. Identifying polycentric elements in Israeli climate governance

The findings do not imply that Israeli climate governance has turned into a polycentric type of governance due to the interactions with foreign actors. Nor do the findings show that polycentric governance is a desirable system for addressing climate concerns in Israel. Rather, the study shows that within the centralized Israeli system, the interventions of foreign actors contributed to the ability of actors to develop their own climate approach, climate actions, and mechanisms of influence over other actors in this system. Therefore, climate governance in Israel, with the support of Germany and the EU, presents *elements of a polycentric system*. An alternative definition of this situation is *polycentric governance arrangements* (Carlisle & Gruby, 2019). As this study interprets, this development was enabled by the *inaction* of the Israeli central government regarding the climate crisis. Inaction gave way to foreign actors exercising their influence, thus contributing to the rearrangement of governance functions in addressing climate concerns. This development correlates with what has been stressed by Bulkeley and Schroeder (2012): Addressing the climate crisis is one theme in which the boundaries between national, subnational, and non-state actors are blurred, and the traditional roles of these actors are contested. The ways that climate conversations were formed by German actors and, in part, by the EU, adds to these developments. In other words, the situation that emerged in Israel derived from a lacuna in knowledge and experience, to which German actors and the EU responded and also contributed substantially to filling this void in a systematic way, indeed, more than other exogenous actors. Changes in Israeli climate governance occurred due to the interventions by Germany and the EU *and* owing to other influences, some of them related to foreign influence. Yet, Germany and the EU contributed at certain key points of time to shaping it into its current form.

These changes are evident through 1) actions that contribute to *flattening* some roles of central level actors, while elevating roles and positions of other actors, for example, ENGOs and to some extent cities. In this way, interactions enabled a form of polycentric system elements to evolve within the Israeli system toward addressing the climate crisis. Such changes are also evident through 2) the different units that were addressing climate concerns independently of one another, and regardless of any other possible involvement by the central actors. These changes are evident through 3) some degree of interconnectedness between these units. This interconnectedness is embedded in formal and informal relations between individuals and organizations. However, as mentioned earlier, communication and dissemination of knowledge in this system is insufficient. The interconnectedness

is also seen in existing practices (albeit new to the Israeli system), such as roundtable consultations, for civil society and central level actors to discuss new policy ideas. Finally, such changes are observable where one notes 4) a strong sense of innovation in these interactions where experimentation and learning was enabled. There is competition and cooperation between these units, at one and the same time (Cole, 2011); decision making regarding climate concerns is spread out in the sense that different actors respond to climate issues at different levels, with or without any top-down centralized control.

The creation of *climate coalitions* around the work done by German political foundations (but also following the work of other German actors such as the Foreign Office) reflects elements of polycentric systems. Several units work in autonomous ways beneath a larger system, connected and interacting with one another. Climate coalitions that were led by Heschel, the ILGBC, Israel Energy Forum, and cities such as Tel Aviv-Yafo, and that involved public officials from ministries and other cities, and other ENGOs – were formed to address climate problems in Israel; they interacted and communicated with each other, sometimes also entering into collaborations. And they attempted to play under a certain *set of rules* of the Israeli system. Each unit addressed certain aspects of climate concerns, for example, energy, green building, and the empowerment and inclusion of other actors. Together, these intermediaries established a community of like-minded professionals and officials that pushed for climate action in Israel. Furthermore, the identification of climate coalitions is suggested here as an element by which to identify changes in governance arrangements toward a system with polycentric elements.

Core units in this system were supported greatly by German actors and the EU. The knowledge Germany and the EU provided, their dissemination practices and platforms, enabled an enhancement of these units' respective political positions (within the Israeli political system). These units have partly counterbalanced some of their dependency on the central Israeli level, while initiating action or engaging in climate schemes. Specifically for Israeli cities, these units or the engagement within them did not reduce cities' dependency on the central level's budgets and national guidance.

The notion of the polycentric governance characteristics of Israeli climate governance is strengthened when considering other engagements that have taken place in parallel to the interactions that were analyzed here. For example, a handful of small, low-level and scattered engagements and interactions between Israeli individuals from cities, ENGOs, the private sector (e.g., consultants and urban planners), and public officials that took place under the umbrella of German and EU cooperation schemes in Israel. These types of engagements include, inter alia, the EU project around energy efficiency that Ramla and Rosh Ha'Ain took part in, and the occasional participation of city officials from across the local level in Israel in learning schemes that involve German actors. In

other words, the different forms of engagements, when taken together, point to the emerging polycentric elements that characterize the response to challenges posed by climate change by Israeli actors, with the so-described strong push from Germany and the EU.

8.2.2.2. Implications of these developments for actors vis-à-vis polycentric governance arrangements

The central level

Some aspects of the findings affirm claims made by Setzer and Nachmany (2018) that the central level is a relevant and important actor in polycentric systems. In the Israeli case, the efforts made by German federal and non-state actors to target Israeli central actors, among others, point to the importance of the latter. The efforts by German actors did not diminish, change, or threaten the Israeli central level's position within the Israeli system. But the central Israeli level's position as virtually the sole or most significant actor within the decision-making process has been altered or, at least, challenged. The engagements of German actors enabled more actors than ever before to take part in early policy-making processes regarding the climate crisis – sometimes ahead of steps taken by the central level. Thus, as Pattberg et al. (2018) point out, polycentricity does not necessarily mean the absence of a central authority; an authoritative body is still required in such a system. In other words, the predominancy of (Israeli) central level actors over an issue-area have been changing, as other Israeli actors, who act to influence the central level, have entered the game. In the Israeli climate governance, the MoEP and, to some extent, the Ministry of Energy and Infrastructure became part of a set of other actors that addressed the climate crisis. The Israeli central level draws, in some instances, on ideas and actors from Germany; but the central level is also influenced by other Israeli actors that are exposed to this influence. Therefore, it can also be said that the Israeli central level did not place constraints on the formation of the new climate coalitions. The central level was part of these coalitions in some instances, while in others appearing indifferent to them. This *inaction* of the central level can also be considered a factor that assists in the mobilization and development of polycentric elements (Pattberg et al., 2018; Setzer & Nachmany, 2018).

The findings also further develop the claim by Setzer and Nachmany (2018), that the central level can provide the overarching rules for or within polycentric systems. On the one hand, the Israeli central level is clearly a key actor, one that provides and sets the rules of the game, i.e., that enables or blocks climate action. Foreign influence, in turn, becomes manifest in adjusting to these rules. On the other hand, the *rules of the game are also shaped* by the foreign actors: Germany and the EU's support provide ideational influence and sufficient financing that enable Israeli actors other than the central level to shape or develop new rules for the "climate game." This study can therefore lead to

the understanding that these rules are a mix of foreign and domestic influence, whereby the former's influence is meaningful enough to compete with some of the influence exercised by the latter.

The local level

The Israeli case presents two contradictory sides at the local level. The Israeli local level made pioneering steps before the central level in their respective attempts to find and implement solutions to climate-change problems, for example, with respect to the 2008 climate convention and in green building. This renders Israeli local authorities, and especially the Forum 15 cities, are actors that are exceeding their assumed roles within the centralized system. This finding correlates with a trend since the 2000s, which saw cities as taking the lead in climate action (Bulkeley, 2010; van der Heijden, 2018). The inclusion of Israeli city officials in the emerging climate coalitions and the engaging of cities through intermediaries facilitated this role, with financial support and the legitimization of being recognized as pioneers contributing to leading steps being taken in cities.

This situation correlates with Aligica and Tarko (2012), who see polycentrism as "a structural feature of social systems of many decision centers having limited and autonomous prerogatives and operating under an overarching set of rules" (p. 207). This description closely describes changes that were made in Israel following the interactions between Germany and the EU and their Israeli partners. These interactions and the Israeli actors they involve within them are bound by regulations and conditions that the Israeli central authority determines; yet these actors and the coalitions they were engaged in are affecting this central authority, challenging, and integrating it into these autonomous centers in ways concerning climate actions that are new.

The other side concerns the Israeli central level. As a centralized system, the Israeli central level ultimately weakens, removes, or develops regulations that ease climate actions for local authorities. For example, this level is responsible for removing regulatory barriers for renewable energy and enacting a national law for green building. These top-down decision-making situations enable action across the local level, including by weak local authorities, or local authorities that were indifferent to climate action. Thus, the influence of foreign actors has moderate influence on large scale schemes that engage cities such as energy saving in households or renewable energy. The influence of foreign actors is visible and meaningful at the niche-like, experimental level or phase of a project in a city. Interpretation of the data of this research suggests that elevating these niches into the large, national-scale level in Israel is moderate at best.

This understanding adds to a key barrier that emerged in the Israeli case: the horizontal scaling of niche-level projects within cities to other cities and other actors, or vertically scaled to the central level. Even Eilat, which provides a unique example among the cities that were examined here, did not

further develop its project on larger scales with other Israeli actors. Instead, it turned the gains from the EU project into other niche experimentations and innovation. However, as depicted above, Eilat strengthens claims that locally induced knowledge is used to differentiate the organization (i.e., the city) from its domestic political environment, and to bypass restrictions and problems that this environment presents (Jasanoff & Martello, 2004). This action points to the development of a city as a distinct unit in polycentric governance arrangement when it comes to dealing with climate concerns. The support from the foreign partners can be a game changer in terms of producing and using new, exogenous knowledge to reach more autonomous action than before and to differentiate the city from other actors.

Non-state actors

Contradicting Setzer and Nachmany (2018), Israeli non-state actors were less dependent on the central level, for example, for frameworks and incentives. Israeli ENGOs that teamed up with German actors were able in their climate initiatives to bypass, work parallel to, and spearhead the Israeli central level. The role of the Israeli ENGOs strengthens claims for the crucial elements of ENGOs in advancing climate actions (Allan & Hadden, 2017; Hadden & Jasny, 2019) and also in advancing more dispersed, autonomous actions by actors in governance systems (Newell et al., 2012; Newig & Fritsch, 2009). Israeli ENGOs operated in parallel fashion to the central level, sometimes spearheading the initiation of climate action and harnessing cities and ministries through an inclusive approach to addressing the climate crisis. The connections with German actors and, with less intensity, with the EU, enabled Israeli non-state actors and, in instances, the HBS itself to advocate for regulation and legislation that assisted in shaping certain types of legal frameworks for addressing climate change and energy in Israel. The climate law and the green building law were formulated by coalitions that were supported continuously and extensively by German actors.

Agency function

The interactions with German actors and the EU and their outputs enabled Israeli actors to become an agency to various extent, which correlates to their roles within the emerging arrangements for polycentric climate governance in Israel. There is sufficient evidence suggesting that the Israeli MoEP has been a pioneer in addressing the climate crisis as compared to other central level bodies (Liven, 2021; Portugaly, 2020), even though its actions came late to the Israeli sphere and with little allocation of resources compared to other issue areas. For example, the MoEP initiated the drafting of a national climate law and a climate economic plan before these concrete plans and strategies were prepared by other ministries such as the Ministry of Energy and Infrastructure and the Ministry of Finance (ibid).

The pioneering element cannot be attributed directly to the MoEP's relations with Germany or with the EU. However, the ministry does have very close relations with these foreign actors, and some key figures in the ministry have taken part in the evolving climate coalitions in Israel. This situation allows for an agency function to be developed out of these mechanisms; developed from the orchestrated relations and the legitimacy gained through bilateral relations.

This agency function is less evident with some of the local level actors. Eilat and, to a lesser extent, Kfar Saba have indeed earned a pioneering position with the help of the EU. However, their agency function was weak, as the knowledge they gained from the foreign support was poorly translated to other cities and upward to the Israeli central level. Tel Aviv-Yafo, however, maintains its agency function simply by virtue of being the leading city in Israel in urban climate and sustainability initiatives – regardless of its bilateral relations. The added knowledge acquired through collaborations with Germany adds up to what the city does on a regular basis. The bilateral relations between Tel Aviv-Yafo and its partner cities in Germany may have had an indirect contribution in the agency function the city has around climate governance in Israel (see also in Shefer, 2019). The limited agency function that interactions lead to in cities may also suggest that agency is *not* dependent on the characteristics of the city, i.e., its political position and economic situation.

In the interactions that were examined here, intermediaries and other non-state actors appear to have weak roles in the transformation process of climate actions in cities, vis-à-vis to knowledge coming from abroad. Shefer (2019) noted this concerning Tel Aviv-Yafo, Berlin and Freiburg. And this study adds to and confirms this notion with respect to Eilat and Kfar Saba. This notion strengthens recent studies concerning the role of intermediaries in city transformation for sustainability (Ehnert et al., 2022). Israeli intermediaries have had little in the way of bilateral engagements with the three cities taken up in this study, German federal-level actors, or EU projects (concerning the climate crisis). Rather, intermediaries and other non-state actors seem to have engaged more through the settings provided by climate coalitions -- through indirect orchestrated platforms. This situation can be explained in that many cities in Israel, as much as they took steps in climate action and provided niches for experimentation, are lacking readiness and perhaps openness to be influenced by intermediaries. In may very well be that intermediaries and orchestrators did not direct their focus in certain cities toward the right people. It may be that targeting more city engineers, treasurers, deputies or even mayors themselves would facilitate greater influence in cities. Instead, in the time of this research, intermediaries focused most of their efforts on engaging officials at, for example, the sustainability and environmental departments; the latter two having, by and large, weak political power in most Israeli municipalities.

There are two other important points to highlight concerning agency. First, the agency function that evolved in these mechanisms cannot be attributed to a single actor in Germany or the EU. Rather, the complex and messy system in which these actors and their recipients in Israel engage provides for agency that is likely to evolve out of an influence of a *system of ideas* that is common to the German actors and, to some extent, the EU. This situation correlates with the work of Stone (2012), which stressed the mobilization effect that "systems" of knowledge have on recipient actors. Second, the background of the actors appeared to be an important element in agency. Israeli recipients from the MoEP, from the three local authorities, and also those in the ENGOs had prior knowledge in most cases and also work experience concerning sustainability. This means that when they faced new knowledge from abroad, they could cover some of the knowledge gaps by themselves. This background may have eased the agency function that developed from the interventions of Germany and the EU. However, it is less clear what will be the case if this knowledge and if these mechanisms are met by less experienced people.

Insights for polycentric climate governance

The study considered polycentric climate governance as a legitimate framework for addressing domestic governance arrangements amid foreign influences. The study explored the role of knowledge as a meaningful factor in developing and shaping elements of polycentric systems in governance arrangements. Furthermore, the study contributed to identifying dominant actors, types of interactions and types of influence that have a fair share each in shaping a governance system into a system with polycentric elements. This study also added to the understanding of levels of interdependence between the units in this system. It is especially intriguing when considering that this development occurs under a centralized political system.

At the same time, the study adds to the potentials and limitations of polycentric units. Units can form ideas, lead experiments, and pioneer other actors or units. But they tend to remain bound to niches and to have trouble scaling their knowledge and disseminating their innovativeness to other units or to the overall system, for example to the central level. Some ideas and experimentations remain bound to the cities where they have developed, with little visible or declared impact by other stakeholders. This resonates with some of the problems discussed in the literature (Hess, 2014; van der Heijden, 2018; Voß & Schroth, 2018; see also chapter 2).

The Israeli case also reflects *leadership and followership* (Torney, 2019) in a system that presents polycentric elements. The study showed how certain Israeli actors gained their leading / pioneering positions through the relations with exogenous actors and exogenous knowledge. The study also showed how pioneering / leadership can still be limited to niches, such as by certain cities

or by climate coalitions that faced difficulties in advancing certain ideas (Liefferink & Wurzel, 2018). The study highlights the leading agents among the exporters of knowledge: Germany and the EU. A key distinction between EU and German actors is that Germany is less reactive and more proactive, whereas the EU is reactive in the sense that many of its support programs funding general ideas to which countries then have to apply to and ask for specific assistance. German actors have developed a more demanding approach, making it possible for them to address a given specific problem, or articulate a specific issue and then pursue it in Israel.

8.2.2. Insights into knowledge transfer mechanisms

This study provides insights into the complementary elements of direct and indirect mechanisms for transferring knowledge to governance arrangements. The Israeli case demonstrates that an examination of governance systems can benefit from addressing these two channels together. Knowledge from one channel cannot be detached from other channels of influence. In the Israeli system, indirect forms of knowledge influenced larger audiences, and direct (bilateral) forms made additional contributions to the designated sites (e.g., cities or ministries). Therefore, this integration of channels of knowledge provides an additional perspective regarding the impact of *accumulated knowledge* on actors and their arrangements for governing climate issues. As highlighted in the second chapter, the study helps to close a literature gap in the study of knowledge formation and transfer.

In the Israeli context, the direct approach of knowledge transfer, which leans toward policy transfer, appears limited in its influence on the outputs and on the audience it aims to reach. Bilateral relations did not yield a significant change in policy, programs or the authority and capabilities of Israeli actors. But they nevertheless enhanced the legitimacy and professional experience of the recipient actors when coming to address future problems related to climate and sustainability. The indirect, orchestrated mechanisms of influence seem to be more impactful in terms of the exposure they afford groups of actors in Israel, compared to the bilateral relations, as well as the legitimization and innovation they offer. They were also addressing climate concerns in places where these had previously received less attention. Indirect forms of knowledge transfer augmented climate coalitions around knowledge items that, taken together, prompt other actors to address these actions.

Policy transfer

The policy transfer elements in this study align with emulation (the endorsing of ideas behind a certain policy), and inspiration (inspiring recipients with the outcome attained by the sender). Emulation and inspiration align in this study with the sender's soft mechanisms of transfer that aim to gain influence over other actors (Stone, 2012).

In many instances, literature marks transfer and especially processes of transfer from Germany to other countries as "success" stories. The focus is often on knowledge transfer that "worked," notwithstanding their shortcomings.[128] This study challenges this common view when "hard" policy is not embedded in the process at hand. Steinbacher (2019) showed that there is little structured strategy to export the Energiewende outside Germany. This study adds that while there is no structured system of transfer, there is nevertheless a *structured system of ideas* that serves the ideological basis for policy transfer (and orchestrated transfer, as well). There are ideational motivations that drive private and public stakeholders to act and promote German knowledge elsewhere.

The success and failure of policy transfer is estimated according to the estimated implementation (Evans, 2009b), policy change and learning. Of these three, there was less implementation and policy change than learning in the Israeli context depicted above. At first glance, this framed the knowledge transfer process that was examined here as failure. However, the findings point to a different benefit and an added value that was gained from direct types of transfer: ensuring the legitimization of ideas and enhancing a (professional) authority over a (climate) issue. Policy transfer is neither a success, nor a failure, but an element that adds on to other efforts that strengthen and support actors when acting to effect a change – for example a policy change. Given the ability of some of the actors to gain greater autonomy in dealing with the issue of the climate crisis, it can be said that policy transfer has an element of implementation: the rooting of *an idea* in the governance system. This is true for the central and local level actors in Israel that were examined here.

This point also leads to a better understanding of the type of action that policy transfer can generate under these conditions and points to what was not transferred and/or adopted. In the bilateral channels with Germany, policy, programs, or technologies were not at the focus of the transfer process. The model that German actors provided did not lead to copying Germany's regulations and policies. Rather, it was the "overall" approach that was found common in Germany and then found *needed* by Israeli actors for developing regulations in the Israeli context. Israeli actors refrained, deliberately and knowingly, from copying German models and experience, preferring instead to draw upon more general lines of action while adapting these to the Israeli context. In that sense, the Israeli case provides a good example of benefits from inspiration as opposed to those from copy-and-paste practices for reaching immediate solutions to a problem (Sharman, 2010).

This study also adds to the relevance of knowledge transfer to different types of actors. Knowledge transfer was perceived as especially relevant to public servants (bureaucrats) in ministries

[128] Comments by Prof. Martin Jänicke during a Ph.D. dissertation defence, the Free University of Berlin. (Author's notes, July 11, 2016.)

and municipalities, and less to the political levels (i.e., mayors, CEOs, ministers) (see Gilardi & Wasserfallen, 2019). The climate issue in Israel at the time of research was considered apolitical and it was hardly taken up in the public debate, thus making it easier to be left to city and ministry officials to deal with. This study also relates to Holden (2009), who stressed that policy transfer is likely to occur when financial gains are at stake. In the Israeli case, bilateral relations are driven by strong ideological elements. But as depicted in this study, economic interests such as promoting green businesses in cities or experimenting with certain technology are important components in the motivation of senders to be involved in policy transfer.

Lastly, the findings provide insights into the power play in policy transfer mechanisms. The study highlighted the power of knowledge and the utilization of the positive element of power relations that derive from knowledge gaps: the contribution and harnessing of recipients to a cause. The study showed that conjoining indirect forms of knowledge transfer with policy transfer has a magnifying / multiplying impact on the target audience. Together, these two mechanisms present a powerful and unified front for presenting knowledge to the receiver. In this front, there is less reliance on hierarchical forms of operations, and more on network-like collaboration.

Orchestration

The first key contribution of this study to the literature on orchestration framework takes up the grounding of this framework for interactions that occur between the local and transnational / foreign jurisdictions. The Israeli case affirms the view that orchestrated relations can occur in the same place by several orchestrators simultaneously, without being contested (Chan et al., 2018). Multiple orchestrations in complex governance settings can also improve and benefit the target setting.

In the Israeli context, the accumulation of events, interests and motivations (Widerberg, 2017) led to the orchestrated forms of knowledge transfer: 1) *Events.* Several windows of opportunity opened in the mid-2010s in Israel, such as preparations by the central government for the 2015 Paris Accord, and the need to show that Israel is acting in accordance with this event. Cities of the Forum 15 were more receptive for climate actions following the 2008 climate convention. In Germany and in Europe, events such as end-dates for phasing out coal-induced power plants provided an ideological infrastructure to mobilize climate action elsewhere. 2) *Interests and motivations*. Israeli ENGOs had the ideational and material interests to link with German actors and the EU. The latter provided finance and platforms for Israeli intermediaries (ENGOs), as well as places to show that ENGO agendas are grounded in real-world examples. Germany's motivation and interest grew when, since the early 2010s, it turned its focus to climate and security, and reinforced its aim to become a global leader for energy transition and climate response. In other words, when these events, interests and motivations

intersected, orchestrated processes could have been formed more easily in the Israeli context and led to governance changes.

The orchestration process also reflects on the "push" element (chapter 2): orchestration starts with "pushers" – especially the political foundations –, which were backed by the pioneering and leading image Germany enjoyed in the eyes of Israeli actors. The "push" element enabled Israeli intermediaries to reach an internal position as pioneer and leader, as in the case of, for example, Eilat or, with German actors, in the case of Heschel and the Israeli Energy Forum. The ILGBC enabled its own pioneering position with what seems to have been less support from its German partners.

Another contribution to orchestration literature is the suggestion for an additional framing of orchestrated relations: *Chains of orchestrations*. The orchestration process that was mainly depicted in this study saw German actors as orchestrators, Israeli actors as intermediaries, and targets as Israeli actors or circles of decision and policy making in Israel. At the same time, these actors may acquire for themselves a different role in orchestration. For example, Israeli intermediaries such as Heschel can be regarded as an orchestrator in Israel. The organizations that Heschel qualifies and coordinates, such as other Israeli ENGOs, and officials from different cities and ministries are (Heschel's) intermediaries. These intermediaries, in turn, mobilize climate action and engage the target audience in Israel, such as other officials in ministries and cities, and larger groups in the Israeli public. In these relations, Heschel and the intermediaries share goals and aims (namely, promoting climate action in Israel) in their efforts to influence Israeli decision makers and public opinion (targets). Lastly, the relations between Heschel and intermediaries have elements of an interdependency: the intermediary organizations depend on the knowledge and expertise that Heschel gained over the years, (partly supported by German actors and the EU). In turn, these intermediaries provide Heschel a de facto reasoning for its operations. This dual role that Heschel is adopting in orchestrated relations resembles the "meta-intermediaries" in international systems (Bäckstrand & Kuyper, 2017). Heschel is an "instigator" and a steerer organization that is less occupied, for example, with confrontation and protests (e.g., Greenpeace Israel, Green Course) and with advocacy (e.g., ILGBC, ATAD). Hence, the Israeli climate governance presents chains of orchestrations, which is an integral part of, and an enabler of, the polycentric elements in this system. These chains of orchestration can also have implications for wider paths and perspectives as to how organizations and actors can conceive the pursuit of their goals. This interpretation also correlates with the claim made by Chan et al. (2018), that several orchestrations can operate in the same setting.

Another contribution provided by this study concerns the causes of orchestration, i.e., their evolving from a system of ideas that drive soft mechanisms of influence. As highlighted previously for policy transfer, this study showed the alignment of orchestration with other forms of knowledge

transfer mechanisms, and their own benefits for orchestration: policy transfer substantiates and reinforces legitimacy and support, both ideational and material, for designated actors in orchestration relations.

The last element that emerges from the findings concerns the legitimacy and the questionable democratic elements of orchestrated processes. The legitimization of actions by Germany and the EU in Israel, and concerns or critical views about these interventions seem absent or negligent in the eyes of many interviewees. This study shows that, as in the case of Heschel, orchestration delivered outputs that aimed to increase the participation of Israeli actors in terms of knowing, learning, and developing climate actions at various governance levels. However, the legitimacy of the German actors to act is firmly grounded. The German actors were not elected by the Israeli public, and they became, as this study interpreted, an integral and *legitimate* actor among the other actors in climate governance arrangements in Israel. In some cases, moreover, the Israeli intermediaries changed or adapted their focus of action, according to the lines stressed by the German actors to gain the latter's support. These lines had a certain ideology linked to addressing the climate problem. Therefore, this study roots even further the legitimacy dilemma that is at the heart of orchestration (Bäckstrand & Kuyper 2017; Thew et al. 2021) when it involves intervening in domestic / national contexts. This point is further amplified when considering the role played by the German embassy as orchestrator in Israel (with EcoPeace as an intermediary). In this case, participation and addressing wide audiences were explicitly lacking in the intended outcome.

This study highlights orchestration as a strong and common way of operation by key German actors that operate in Israel. While the EU's bilateral relations with the Israeli central level are leaning toward policy transfer, it is less clear that orchestration suits the operations of the Union toward Israeli non-state actors and, to a lesser extent, with Israeli cities. Here, the study interprets these relations as falling between policy transfer and orchestration. On the one hand, the EU provides financial and sometimes professional support to Israeli cities and ENGOs. These actions, however, lack the steering element that is strongly visible in the orchestration efforts by German actors. Both the EU and Israeli cities and ENGOs share a general, baseline understanding as to what they want to achieve through the Union's projects and financial support (i.e., shared goals and aims). For example, the SUDEP project is aimed at bringing Mediterranean cities closer to EU standards and performances, in terms of energy-saving schemes, starting from a broad overview of the need of these cities to reduce GHG emissions. With this overall goal, cities may be designated as intermediaries, which can have a certain degree of influence on targets in their countries, for example, decision makers and the public. However, the interdependence between the Union and ENGOs or cities seems weaker than that of German foundations with these types of actors. In the case of Germany, both ENGOs and the

foundations are collaborating in projects that include ideational and financial support and are relatively clear in their aims and goals. In the case of the EU, financial support is detached from the action itself, and the union is less involved in the project on the ground. The support by the EU aims more to keep Israeli ENGOs working and pursuing their goals based on the Union's belief-system that promotes active and vibrant civil society engagement, and the alignment of this belief with the Union's pursuit of stability in its neighboring countries.

8.2.3. Insights into soft power

First and foremost, this study presents an example of exercising soft power in the context of tackling the climate crisis and influencing climate governance arrangements: persuading and mobilizing others to act on the climate crisis through the power of ideas and through the export of knowledge. The study showed how the power of persuasion works: Germany and the EU used their attractiveness and legitimacy, as entities with finance, knowledge, and expertise in the climate area, in dealing with Israeli actors.

The study also showed how soft power was used with public diplomacy efforts. It is evident in the work undertaken by Germany, but less so in that undertaken by the EU: efforts to influence not only (central) governmental actors but also non-state actors and, in a broader sense, the public in Israel. The Federal Foreign Office and the political foundations presented such an influence, while the EU chose to focus more on designated ministries and cities, with little thought of conveying the attractiveness and the knowledge beyond the designated actors in each project.

The soft power that was depicted here resembles the "network model" of soft power (Hocking, 2005): State and non-state actors work together to reach the sender's soft power goals. An innovative element that arises from the Israeli case is that the network can be steered through several channels, i.e., steered by state actors alone or in a combined integration of state and non-state actors together (e.g., in the case of the foreign office and KAS), or even through the dominance of non-state actors with little steering by state actors. In the latter constellation, the sender identifies, de facto, with the state's values and interests when these align with its own agendas and values.

In addition, the study presented knowledge transfer as a mean to understand mechanisms of soft influence, and with that it contributes to filling gaps in the processes and operations of "real world" soft power means. The study enabled a better understanding of the role of non-state actors in the "bargaining relationships" (Gallarotti, 2011) that soft power senders offer to recipients. Additionally, the study contributed to filling gaps in understanding outcomes of soft power and the role and perspectives of recipients of soft mechanisms of influence, especially where it focuses on domestic and not on international systems. This was shown by also using the role of intermediaries (Riordan, 2005).

Concerning the impacts of power relations on the outcomes (Melissen, 2005a), the study strengthens the notions of "positive" power pressure (Partzsch, 2017): the ability of senders to influence other actors to be effective in delivering and sharing knowledge, rather than to pressure and push them to develop, for example, adequate regulation. The pressure here is directed less toward achieving immediate or intrinsic gains for the sender, but rather toward gaining influence for a "greater cause." Second, the state and non-state actors in Germany provided integrated relations that exceed inner (German) political power struggles. Similarly, power struggles between the political foundations were absent in knowledge transfer mechanisms. Rivalries were friendly, professional, and did not hamper each foundation's efforts to reach its goals. The scattered operations of German actors benefitted the overarching aims and goals of these selfsame actors: each actor focused on a certain group of actors in Israel, thus contributing to cumulative, soft influence on several Israeli governance groups.

8.2.4. Insights into obstacles and barriers

The neutrality of the climate issue in Israel is probably one of the key reasons for the lack of substantial opposition to knowledge transfer from politicians, decision makers, and other actors in the Israeli system. As a "non-issue," it was able to take hold in some environments and among climate coalitions. But at the same time, it did not manage to break through to the public debate until the late 2010s. As a non-contested issue, the climate received little attention from key actors in the Israeli governance system, such as the Ministry of Finance and the Ministry of Transportation, as well as key ENGOs such as ATAD and SPNI. There were no political interests and no political powers that would want to resist the knowledge transfer mechanisms and their impacts.

Second, German actors and Israeli intermediaries provided an image and a model that were focused less on the political contestation and process that brought Germany to where it is, and more on the outcome of, and the ideas behind, these models and policies. Israeli actors that were not exposed to the political contestation and political processes that enabled the "climate outcomes" in Germany and even in EU agendas, are missing a fundamental aspect of the story. In other words, Israeli actors saw the "end product" without understanding the (political) process in full. Even if Israeli actors had been exposed to the protests in Freiburg, which led the city to be what it is today (Kronsell, 2013), the knowledge exchange platforms skip, in general, background and contexts of federal or municipal governmental decision. Lack of local context misses depths and processes that Israeli actors could draw upon and learn from more thoroughly when they themselves chose to act and strive to bring about change. Raising questions such as, what enabled these outcomes? And, why were local actors shaped policies and other actions in certain ways and not another? could have enrich and

deepen the operations of the Israeli actors in Israel and, following this, bring to different or modified governance outcomes that were identified in this research.

Other barriers are therefore the organization and structures that are part of climate governance arrangements in Israel, and partly structural barriers that can be found on the side of the senders. One of the key problems is disseminating knowledge within the Israeli system. It was mentioned before that a pioneer city such as Eilat did not scale up to the Israeli central level and horizontally to other cities what it learned and experienced with other (foreign) actors, and that climate coalitions tended to remain bound to niches and to encounter difficulties in reaching public awareness. One major reason for this is the frictions that exist between central and local levels in Israel (although this has shown signs of change since the late 2010s), (Razin, 2020; D. F. Shmueli et al., 2019)which can also be interpreted as a lack of trust among actors. Both these levels lack infrastructure and official platforms and networks that aim to scale gained knowledge and learn from it. (See more on local-central relations, and frictions, in Israel in, for example, Razin, 2020 and Shmueli et al., 2019) While ENGOs such as Life and Environment operate platforms and networks for and among municipalities, there is little evidence that these networks and platforms exist to address and share gained knowledge from other actors. In this sense, the polycentric elements – i.e., units that develop climate action and communicate with each other – are faced with difficulties and lack of frameworks for the efficient dissemination of knowledge. The scattering of units that address the climate crisis in this governance system is, in fact, suffering from a lack of authoritative actors or of a governance level, by which, in any case, a dissemination of knowledge can be effectively steered and coordinated. The Israeli case correlates with the arguments of critics about the potentials of polycentric systems to address climate problems.

In addition, and still more related to the organizational structures and modes of operation of the units in the governance system, the findings confirm previous studies in their observation that actors often have cognitive difficulties in accepting and adopting exogenous knowledge that challenges existing work habits and belief systems. This point is, however, less relevant to the Israeli intermediaries and other ENGOs than it does to the ministries and cities that were examined here.

It was mentioned earlier that the background and experience of actors is an important component in gaining and implementing exogenous knowledge. The lack of prior knowledge by the actors presents a dichotomous problem: On the one hand, Israeli actors lack prior knowledge about climate problems, which, in turn, constrains them from acting to address climate issues. On the other hand, the work of agency aims to change this very problem – changing actors' mindsets so that things could be changed. This potentially provides an additional explanation for why climate coalitions

remained in niche-like sites and there were problems associated with the dissemination of climate knowledge.

Lastly, a key barrier for influence that is specifically concerned with the EU is the Union's ways of operating. The EU focuses on projects within the framework of "regional networks," and less on knowledge transfer that can set the ground for larger political actions.

8.3. Summary of key contributions of this study

Following the preceding summary of key findings and discussion, this section summarizes the main theoretical and empirical contributions that this study developed.

8.3.1. Main theoretical contributions

First, this study contributed an analytical framework that integrates four analytical concepts for the purpose of addressing the process of knowledge transfer mechanisms and their impact on climate governance arrangements. A novelty of this framework is that it addresses this process from the initiation phase (i.e., the motivations / drivers of foreign actors to exercise their influence), to the transfer and "implementation" phase (i.e., how these mechanisms are working and what are they bringing about in the target jurisdiction) and, lastly, to translating the outputs of these mechanisms to changes in governance arrangements vis-à-vis addressing the climate crisis.

Second, within this integration, this framework utilized soft power with the concept of polycentric governance and examining the links between them. Especially, such integration is scarce in researching social / political responses to the climate crisis. This framework provides an understanding regarding knowledge transfer mechanisms as being comprised of both direct and indirect and "pulling" and "pushing" elements, regarding to how and why they influence climate governance arrangements. Lastly, the integrated analytical framework that is suggested by this study has the potential to be utilized to understand other instances of interactions between foreign / exogenous forces and actors form a domestic jurisdiction concerning governance systems addressing the climate crisis or other issue areas. This study also added to the understanding of what types of interactions seem to work better to address climate concerns in certain constellations and conditions.

Third, while in many cases research on climate politics and governance tends to focus on a single level of governance or, at least, on relationships between one level and others, this dissertation provided a broader outlook: the dissertation examined interactions taking place between several types of actors from several levels of governance and from different jurisdictions. Thus, this dissertation adds to understanding complex systems of governance and relations between actors amid their efforts to address the climate crisis.

8.3.2. Main empirical contributions

Using Israel as a case study provides several empirical contributions. First, Israel presents a case of a country with a unitary system in which the central government has much power over other authorities and actors; and that in parallel this system undergoes certain changes such as decentralization and dissemination of authority to other governance levels and actors, with and without relation to climate change. Examining Israel contributes to understanding unitary systems and changes they undergo amid climate change and the forces that shape the responses of these systems to climate change them.

Second, social-science research regarding the climate crisis tends to focus on (global) big GHG emitters such as the US, the EU, and the BRICS countries (Brazil, Russia, India, China, and South Africa). While other countries may, individually, contribute less to global climate problems than these big emitters, there is an acute need to understand the policies, politics, and governance systems in other countries. These "small emitters" have also contributed to the global rise in GHG emissions, for example, through their economic dependency on the global big emitters. As the Israeli case shows, the country is small but, nevertheless, presents high emissions per capita. Understanding similar cases to that of Israel can assist in advancing further research on how to address climate problems in these types of countries.

Other than examining the Israeli case, this dissertation added also to understanding of the roles the EU and Germany play in global climate diplomacy, in advancing climate initiatives in jurisdictions beyond their own, in the ways they exercise these advancements, and in terms of outputs and changes in governance arrangements that follow EU and German actions.

8.4. Shortcomings of this research and future avenues for research

As already mentioned in chapter 3, the innovative methodology and one of the strengths of this study is its focus on several governance levels and several sets of actors that engage in exogenous influence over one setting (Israel). Studies in climate governance and climate policy tend to focus on one governance level or one type (or very few types) of actor(s) together. By contrast, this study provides insights into several levels and actors and their respective interconnectedness. However, this approach is limited to addressing large numbers of actors from the same governance level or type of actor, such as Israeli cities and ministries.

Second, this study takes a qualitative approach to understanding types and impacts of influence. Chapter 3 elaborated on the advantages of this approach considering the stated goals of this study. For example, this approach enables an in-depth understanding of what actors think and how they perceive things and how this translates into governance arrangements. The qualitative approach assists in probing subtle nuances that can sometimes be overlooked in quantitative

approaches. However, the pursuit of mixed-method approaches may well have been able to provide greater accuracy in *measuring* the influence that was examined. For example, using questionnaires for Israeli city-level or ministry-level actors in Israel concerning their feelings and attitudes toward Germany or foreign engagements in general could further ground – or challenge – some of the understandings that this study interpreted. It is important to stress that this approach might have come at the expense of the relatively high number of interviewees, which eventually compensates for some of the things that quantitative methods could have provided.

Third, certain constraints of time and other resources prevented the author of this study from exploring more of Germany's and the EU's respective influence during the 2000s. Addressing the first decade of the 2000s may have widened the perspectives with regard to the interpretations of the developments that occurred in Israel's climate governance in the 2010s. Limited resources made it possible to thoroughly analyze only a limited number of databases and data sources in Israel, Germany and the EU. For example, a digitalized, full screening of parliamentary discussions in Israel that address the climate crisis (or that relate to the crisis to some respect) might have provided for a better understanding of the extent or depth to which Germany and the EU could serve as a legitimate model for Israeli climate action.

Considering the abovementioned synthesis, the discussion, and the limits of this research, the following paths for future research can be drawn. These avenues of research relate to Israel and potentially to other case studies. First, this study opens the door to research on environmental and climate-related aspects in Israel's relations both with the EU and with Germany. This focus has been rarely addressed to date. Future research could benefit from a more in-depth understanding of governance formations and changes in the "German system" that operate to export knowledge abroad.

Second, contrasting the knowledge from abroad, as depicted by this study, with other sources of knowledge, such as locally induced knowledge, would provide further insights into both types of sources of knowledge and into their impacts as well. For example, the comparative analyses of climate actions, policies and/or governance outcomes in cities or ministries, including those which engage with foreign stakeholders and those which do not, would be highly valuable.

Third, the multiple channels of engagement available to Israel through EU initiatives demand more in-depth examination about research and development networks and EU regional networks. Given the large amount of funding dedicated by the EU to such initiatives, understanding Israel's role in these networks and the gains from participating in them – and also that of other countries – would be highly beneficial. Given the new, clear path that the EU is advancing with its Green Deal,

understanding more about the initiatives and engagements of EU neighboring countries within this framework is needed.

Fourth, the reluctance of Israeli cities and even central level actors to take part in EU and other global and transnational networks such as ICLEI or Eurocities deserves scrutiny. Apart from Tel Aviv-Yafo and, more recently, Eilat, the vast majority of Israeli cities seems to underestimate the potentials of transnational activities. Why is that? How can that be overcome? Answering these questions could also shed light on other central- and local-level actors in other countries.

Fifth, examining the influence on climate action and climate governance in Israel by other foreign actors such as the OECD, the United Nations (UN), and other international organizations could widen the perspectives beyond those offered in this study. Such understanding is warranted in relation to other countries influential on Israel, such as the US and emerging powers such as China and India. The recent normalization with the Arab world, which also includes (economic) aspects of climate and energy, deserves attention in terms of its potential influence on Israeli climate governance. Lastly, examining large-scale funding schemes for research and development such as the EU's Horizon programs and Germany's Deutsche Forschungsgemeinschaft (DFG) that see constant participation of Israeli actors would contribute to the thorough understanding of Israeli climate governance arrangements.

These points are relevant for other countries that are tied to powerful allies and are subject to soft power influence by state and non-state actors. In particular, operations by Germany and the EU in other EU neighboring countries or other emerging economies could further add to what the Israeli experience, as analyzed in this study, can reveal.

8.5. Conclusions

This study showed how foreign actors made a substantial contribution to ideational infrastructure in Israel. This contribution stimulated climate action and changes in climate governance arrangements in Israel. Foreign influence involved mainly indirect, orchestrated moves, with additional support from bilateral, direct forms of cooperation at the central and local levels. Foreign actors act from within a system of ideas and ideologies that portrays them as forerunners and leaders in climate action. Germany, the EU, and other foreign actors who consider themselves to be more advanced in addressing the climate change problem than Israel, have set up programs and engaged in exchanges intended to enhance or stimulate climate action abroad. Their self-image of leadership, and their will to bring about change drive them to act. These ideas are conveyed through soft mechanisms of influence targeting recipients to persuade them to adopt these ideologies and ideas. While this system is organized in terms of its unity of ideas and ideologies, it is not structured in terms of its operationalization: actors act together and separately to have an influence, thus contributing to polycentric elements in climate governance in Israel.

The example of climate governance in Israel may reflect on other systems in Israel and on other countries: foreign interventions, especially indirect ones that are orchestrated by powerful foreign actors, could contribute to other governance changes in target countries. For example, pursuing goals such as equality, democracy, and even fair digitization processes could benefit from orchestrated approaches or by leveraging foreign financial support to reach global coalitions (e.g., as both Eilat and Heschel were able to do). This type of influence is already being advanced by German political foundations in Israel and in other countries. Other organizations could benefit from this approach when trying to advance these agendas. A recent reminder of this potential benefit can be found in evolving concerns in other Israeli spheres of governance, as is the case, with net (internet) neutrality. This is a sphere with high involvement of private and central government actors, but with little involvement of other actors such as NGOs (Ginosar, 2021). Viewed from a broader perspective, such influence and its potential benefit could be also relevant for addressing problems and challenges tied to the global turmoil of the late 2010s and early 2020s, such as, fake news in climate policy and election campaigns (Schaller & Carius, 2019), the COVID-19 pandemic, or the Ukrainian war.

Considering the possibility that, as suggested by this study, German political foundations are new actors in climate governance formations, their legitimacy needs to be addressed and discussed. This is especially intriguing for Israel in climate-related actions that correlate to national security and geopolitics (e.g., the climate-security nexus and renewable energy). The country is subjected to foreign interventions, for example, by the US, on a regular basis around national security issues. And with view to national security and climate concerns, such foreign interventions needs to be taken more into account.

The findings of this study and the discussions that were elaborated above should be reflected against the changing role of Germany and the EU in leading climate action. Germany is now struggling to retain its global leading position as “climate protector” (Weston et al., 2022), and the EU aims to lead the way to reduce emissions through new policies such as the Union’s Fit-For-55 package (a set of proposals to revise and update EU legislation in order to reach the Union’s target of reducing net greenhouse gas emissions by at least 55% by 2030). The efforts Germany and the EU make to export their experience and to establish their position as global pioneers and leaders of climate action are being contested by other nations’ efforts to do the same, for instance, those by China and the US. Also, the efforts of Germany and the EU are constantly being contested from within their own respective jurisdictions. In addition, the EU’s attempts to include nuclear energy and natural gas as legitimate sources of energy for reaching the Union’s GHG emission reduction goals by 2050 would have an impact on what and how knowledge will be transferred to neighboring countries and elsewhere in the world. Likewise, Germany’s reliance on natural gas and its plans to increase the use

of hydrogen to fuel its economy will probably have an impact on the knowledge it is able and willing to export, as well as on its image and global position as a pioneer and a leader in tackling climate problems. The operations of German actors and the EU depicted in this study, and their influence, will likely be affected by these changes in Germany and the EU. A hint at these changes can be seen in the growing debate in Israel over the use of hydrogen, and in the expectation of Israeli government to export Israeli natural gas to European countries. These reflections regarding Germany and the EU gain even more importance when considering the rapid changes that occurred in Europe, Germany, and Israel during the COVID-19 pandemic and that later followed by the Union and Germany's hard political shift away from their own respective dependency on Russian natural gas immediately after Russia launched war on the Ukraine in 2022. These events increased the stakes for a rapid transition toward low-carbon and sustainable paths of development. In other words, the rapid changes that these major climate-powers underwent signal that the shifts they continue to see are likely to influence other countries and especially those that are relying on exogenous knowledge and expertise – as is the case in Israel.

Structural moves in recipient countries that are tightly linked to tackling the climate crisis and reducing GHG emissions, such as the 2018 reform in the Israeli electricity market, are a result of a broad array of factors and influences – especially for countries such as Israel that are late in taking response measures. The role of foreign influence, as was thematized in this study, has helped to facilitate ideas that, in turn, shaped climate governance in Israel. The case examined here showed a limited ability of foreign actors to influence structural changes, but strong – or at least meaningful – influence on how to reach certain steps that advance structural changes. Herein lies the instructive strength of the group of knowledge-transfer mechanisms that are used by Germany as well as by the EU: the manner they have facilitated the dissemination of ideas and examples of how things can and should be among different sets of recipients. Here, ideas have power to drive or draw into action stakeholders that otherwise might or could not take part in climate action. (See also in, for example, (Schwartz, 2022) The need to tackle the climate crisis enabled action by various knowledge groups, in a way that is not centered around a single interpretation of ideas imported from abroad. However, exporters of knowledge should ask themselves whether the end results are worth the investments. In my opinion, these efforts are worthwhile when considering their overall impact on a broad array of Israeli actors that were exposed both to ideas from Germany and to actions made possible through EU support – rather than impacts derived from specific, bilateral actions. In other words, in my interpretation, enhancing networks indirectly and establishing orchestrated relations will increase the potential impact of foreign influencers over domestic action. But this should be approached under the condition that the exporters are not expecting quick, immediate change, in policies or regulations.

The developments and changes depicted here were made “under the radar” in the sense that they did not challenge core beliefs and the terms of political debate in the Israeli system. This ever-growing legitimization of climate action in Israeli decision-making circles may, however, come to be challenged eventually. Signs of climate skepticism can already be seen in parts of conservative, populist circles in Israel, which have access to and influence on Israeli decision makers (see, for example, Baratz, 2021). These circles are influenced and financed by other, right-wing circles, oftentimes libertarian and religious in outlook, in Israel and the US (Ga’aton, 2023). Their ideas and ideologies concur, for example, with constraining the race for renewable energy and with maintaining the dominance of fossil fuels in the energy market; they would also deter the introduction of a carbon tax and a pursuit of other ideas that seem to take root in Israel through the channels that were depicted in this study. As with the work done by German non-state actors, climate skepticism or other opinions that similarly reject rapid decarbonization and, for example, support dependency on fossil fuels can also find expression in the arrangements provided for climate governance in Israel, such as through think tanks, media outputs and learning excursions. This could render the climate issue in Israel political and contested, and thus, in turn, further constrain climate action.

Lastly, if political barriers are not the larger obstacle to- and in- knowledge transfer mechanisms, then senders and receivers might benefit more from focusing their operations and activities on internal barriers that can be found in the recipient systems; for example, they should focus on the scaling of opportunities and mechanisms between governance levels and actors, and on the equipping of individuals and organizations with sufficient knowledge for starting and addressing the climate issue. It means, for instance, that there is no need to “convince” or to issue a political competing argument to bring central level actors to the table. It can also be more effective for senders to bring competing ideas about ruling values and ideologies to the table: not through a clashing of alternative or opposing ideas with dominant ideas but through a process of persuasion that takes place from within the system. This is crucial for exogenous actors that operate within centralized systems.

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Appendix: Table of interviewees

List of interviews and conversations, 2015 - 2021

Number of interview / conversation	Name / position	Country	Sector	Affiliation (at the time of communication)	Means of communication	Date & place of communication
1.	Public officials	IL	Central government	Ministry of Environmental Protection; International Relations Unit	Background talk, group conversation	November 2015, Jerusalem
2.	Dr. Orly Ronen	IL	Academia	Tel Aviv University	Background talk	December 2015; Tel Aviv-Yafo
3.	Consultant	IL	Private sector	Keren Energy	Skype conversation	December 2015
4.	Staff member (senior)	IL	ENGO	Israeli Green Building Council (ILGBC)	Background talk	December 2015
5.	Radmila Abramov	IL	Subnational government	City of Tel Aviv-Yafo, foreign relations unit,	Phone interview	January 17, 2016
6.	Public official	IL	Central government	Ministry of Environmental Protection; Energy and Climate Change Division	Phone interview	February 2016
7.	Public official	IL	Subnational government	City of Netanya, Environmental unit	Phone interview	June 2016
8.	Dr. Yoav Lehrman	IL	Private sector	Consultant	Personal interview	October 2016, Tel Aviv-Yafo
9.	Dr. Ohad Karni	IL	Central government	Ministry of Environmental Protection, Regulation and policy unit	Personal interview	October 2016
10.	Public official	IL	Subnational government	City of Kfar Saba, Sustainability unit	Personal Interviews	November 2016; Kfar Saba

11.	Public officials	IL	Central government	Ministry of Finance, Infrastructures unit	Personal interview (group interview)	November 2016, Jerusalem
12.	Ira Rozen	IL	Subnational government	City of Tel Aviv-Yafo, Planning unit	Personal interview	November 2016, Tel Aviv-Yafo
13.	Staff member (senior)	IL	ENGO	Society for the Protection of Nature in Israel (SPNI)	Personal interview	November 8, 2016, Tel Aviv
14.	Journalist	IL	Media	Haaretz	Personal interview	November 2016, Tel Aviv-Yafo
15.	Staff member	IL	ENGO	Heschel Sustainability Center	Personal interview	November 2016, Tel Aviv-Yafo
16.	Public official	IL	Central government	Ministry of Environmental Protection, Tel Aviv-Yafo district	Phone interview	November 2016
17.	Staff member (secior)	IL	ENGO	ILGBC	Personal interview	November 2016
18.	Public official	IL	Subnational government	City of Herzliya, Environmental unit	Personal interview	November 2016, Herzliya
19.	Public official	IL	Subnational government	City of Herzliya, Environmental unit	Personal interview	November & December 2016, Herzliya
20.	Staff member	IL	NGO	Forum 15	Personal interview	November 2016, Tel Aviv-Yafo
21.	Arch. Rinat Milo	IL	Subnational government	City of Tel Aviv-Yafo, Conservation unit	Personal interview	November 2016, Tel Aviv-Yafo
22.	Shira Ben Yemini & Public official	IL	Subnational government	City of Tel Aviv-Yafo, Liebling Center for the White City Conservation	Personal interview (group interview)	November 2016, Tel Aviv-Yafo

23.	Public official	IL	Central government	Ministry of Construction and Housing, Strategic planning and policy unit	Personal interview	November 2016, Tel Aviv-Yafo
24.	Staff member	IL	NGO	gXc (Green X Change)	Skype interview	November 2016
25.	Public official (senior)	IL	Central government	Ministry of Environmental Protection, Green Building unit	Personal Interview	November 2016, Tel Aviv-Yafo
26.	Elected official	IL	National level	Member of Parliament (Member of Knesset)	Phone interview	January 2017
27.	Public official	IL	Subnational government; Central government	City of Tel Aviv-Yafo, Planning unit; Ministry of Energy and Infrastructure, Sustainable Energy unit	Phone interview; Zoom interview	February 2017; September 2020
28.	Noam Segal	IL	ENGO	Israel Energy Forum	Skype interview	February 2018
29.	Staff member	IL	ENGO	ILGBC	Personal interview	February 12, 2018
30.	Public official (senior)	IL	Subnational government	City of Eilat, Environmental unit	Personal interview	February 2018, Tel Aviv-Yafo
31.	Former staff member (senior)	IL	ENGO	Life & Environment	Phone interview	February 2018
32.	Public official (senior)	IL	Central government	Israel-Europe Research & Innovation Directorate (ISRED)	Phone interview	June 2018
33.	David Dunetz	IL	ENGO	Heschel Sustainability center	Personal interview	December 2018, Tel Aviv-Yafo
34.	Public officials (seniors)	IL	Central government	The Electricity authority	Personal interview (group interview)	December 2018, Tel Aviv-Yafo

35.	Staff member (senior)	IL	ENGO	15 Minutes	Personal interview	December 2018, Tel Aviv-Yafo
36.	Staff member (senior)	IL	ENGO	Life & Environment	Personal interview	December 2018, Tel Aviv-Yafo
37.	Staff member	IL	ENGO	Life & Environment	Personal interview	December 2018, Tel Aviv-Yafo
38.	Public official (senior)	IL	Central government	Ministry of Energy and Infrastructure	Personal interview	December 2018, Jerusalem
39.	Staff member (senior)	IL	Public Benefit company	Eilat Eilot	Email correspondence	Received January 02, 2019
40.	Public official (senior)	IL	Central government	Ministry of Construction and Housing	Personal interview	January 2019, Tel Aviv-Yafo
41.	Staff member	IL	ENGO	EcoPeace Middle East	Phone interview	April 2019
42.	Staff member	IL	ENGO	Zalul	Phone interview	June 2019
43.	Public official	IL	Central government	Ministry of Environmental Protection, Economic Policy and Strategy Division	Personal interview	July 2019, Tel Aviv-Yafo
44.	Public official (senior)	IL	Subnational government	City of Kfar Saba	Personal interview	July 2019, Kfar Saba
45.	Entrepreneur & staff member	IL	Private sector / ENGO	Consultant / Heshcel Sustainability Center	Zoom interview (group interview)	August 2020
46.	Employee	EU	Public sector	EU delegation to Israel	Personal interview	February 2018, Tel Aviv-Yafo

47.	Public official	EU	Public sector	European Commission, DG-NEAR – B2	Phone interview	April 2018
48.	Public official	EU	Public sector	European Commission, DG - NEAR - B1	Phone interview	April 2018
49.	Employee	GR	Private sector	AHK Israel	Background conversation; personal interview	November 2015; November 2016
50.	Staff member	GR	Political foundation	Heinrich Boel Foundation (HBS), Israel	Phone interview	January 2016; November 2016
51.	Public official	GR	Subnational government	City of Leipzig	Personal interview	February 2017, Leipzig
52.	Employee	GR	Private sector	RENAC	Personal interview	February 2017, Berlin
53.	Volunteer	GR	NPO	Freundeskreis Freiburg-Tel Aviv-Yafo	Personal interview	March 2017, Freiburg
54.	Public official	GR	Subnational government	City of Freiburg,	Personal interview	March 2017, Freiburg
55..	David Uong,	GR	Public-private partnership	Berliner Energieagentur GmbH	Personal interview	March 2017, Berlin
56.	Employee	GR	Private sector	Freiburg Future Lab	Personal interview	April 2018, Freiburg
57.	Staff member	GR	Political foundation	Konrad Adenauer Stiftung (KAS) Israel	Phone interview	May 2018

58.	Public officials	GR	Federal government	The Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)	Personal conversation	February 2019, Berlin
59.	Public official	GR	Federal government	BMUV	Personal conversation	February 2019
60.	Staff member	GR	Political foundation	KAS	Personal interview	June 2019, Berlin
61.	Public official	GR	Federal government	Federal Foreign Office, Climate and Environmental Policy Division	Personal interview	July 2019, Berlin
62.	Jasper Eitze	GR	Political foundation	KAS, Climate and energy policy advisor	Personal interview	July 2019, Berlin
63.	Public officials	GR	Federal government	Federal Foreign Office	Group conversation	August 2019, Berlin
64.	Public officials	GR	Federal Government	BMUV, Environment, Transport Electric Mobility	Group conversation	August 2019, Berlin
65.	Public officials	GR	Federal government	BMUV, Sustainable Development and Citizen Participation	Group conversation	August 2019, Berlin
66.	Public officials	GR	Federal government	The Federal Ministry for Economic Affairs and Climate Action (BMWK)	Group conversation	August 2019, Berlin

67.	Public officials	GR	Subnational Government	City of Berlin, Senate Department for the Environment, Transport and Climate Protection	Group conversation	August 2019, Berlin
68.	Public officials	GR	Federal government	BMWK, Strategy and planning of the Energiewende	Group conversation	August 2019, Berlin