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# **Learning in Governance**

## **Climate Policy Integration in the European Union**

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## 7 Comparison of Learning across Cases

A number of generalizable findings emerge when comparing across cases. There is a difference between factual, experiential and constructivist learning in European policymaking and earth system governance. Furthermore, other factors besides learning, such as power politics, institutional machinery, and defensive avoidance, can have a similar explanatory power for policy change. Crucial determinants for learning are the kind of beliefs each coalition of actors holds and whether these beliefs are compatible with the other coalition's beliefs, and thereby their policy objectives. The time factor (i.e., when key actors formed their deeper, policy design, and policy detail beliefs) also matters. Depending on the time frame, learning can be included or excluded as a relevant factor influencing policy change. There is also a link between the European Commission as a collective policy entrepreneur and individual policy entrepreneurs, who either act according to preexisting deeper beliefs, change them as a result of wider developments in the sociopolitical landscape or change their beliefs as a result of input provided during the policymaking process. Table 7.1 summarizes the findings on learning across the four cases of the energy and transport components of the RED, as well as the early and more recent greening of the CAP. Overall, learning occurred across cases and subcategories except for deeper beliefs, as these were usually formed decades before the time frame of analysis, often during actors' youth or early adulthood (thus, they are labeled as limited). Conflict emerged in cases where actors held conflicting policy and policy detail beliefs as a result of constructivist learning among only one group of actors.

### **The Sociopolitical Landscape as a Driver for Learning and Policy Change**

Wider changes in how society perceives environmental, economic, and social challenges, as well as subsequent changes in political framework conditions,

**Table 7.1**  
Comparison of findings on learning across cases

Learning	RED	Biofuels/ Renewables in Transport	CAP, 1985–2003	CAP, 2004–2020
Individual level				
Factual learning	Yes	Yes	Yes	Yes
Experiential learning	Yes	Yes	Yes	Yes
Constructivist learning—Deeper beliefs	Limited	No	No	No
Constructivist learning—Policy design beliefs	No	Yes	Yes	Yes
Constructivist learning—Policy detail beliefs	No	Yes <sup>a</sup> and no <sup>b</sup>	Yes	Yes
Organizational level				
Factual learning	Yes	Yes	Yes	Yes
Experiential learning	Yes	Yes	Yes	Yes
Constructivist learning—Deeper beliefs	No	No	No	No
Constructivist learning—Policy design beliefs	No	Yes	Yes	Yes
Constructivist learning—Policy detail beliefs	No (only strategic)	Yes <sup>a</sup> and no <sup>b</sup>	Yes	Yes

<sup>a</sup>environment-focused coalition.

<sup>b</sup>economy-focused coalition.

played an important role as drivers for learning. Nilsson (2005), Nilsson and Eckerberg (2007), and Feindt (2010) focused in their empirical analysis on changes in the wider policy frames on what can be regarded as the sociopolitical landscape (e.g., from energy as risk to energy as market [Nilsson 2005]) and outlined wider societal support for changes in policy. They used shifts in the way that energy policy is framed as evidence of learning. Similarly, Feindt (2010) concluded that learning occurred in the overall process of introducing greening aspects into the CAP. The findings point toward shifting policy frames over three decades that were influenced by wider sociopolitical perspectives and overall shifts. In that sense, Nilsson's (2005) findings have parallels to the analytical dimension of the sociopolitical landscape, which accounts for overall shifts in how society and the wider political spectrum, including dominant economic actors and voters, see and frame the issue and determine framework conditions, as well as entry points when learning occurs among individuals and governmental organizations.

In the case studies looked at in this book, policymakers' perceptions of societal changes and shifting public preferences provided the driver for policy development. Interviewees pointed toward hallmark events on the

international level, such as the 1972 Stockholm Summit/UN Conference on the Human Environment (Biermann, Davies, and Grijp 2009), as the origin of integrating environmental aspects into energy, transport, and agriculture policy. This coincided with a bottom-up movement of environmentalists, green political parties, and the founding of many major ENGOs that subsequently entered the political sphere to represent environmental interests (Olper 2008).

The next big push toward environmental and climate considerations came at the international level, with the 1987 Brundtland Report and the 1992 Rio Earth Summit, where governments agreed on the Agenda 21 plan and the Rio Declaration on Environment and Development. They also established the United Nations Convention on Biological Diversity and the UNFCCC, which agreed on the Kyoto Protocol in 1997 (Wijen and Ansari 2007). This resulted in pressure on the EU to implement its international commitments by setting up climate policies. The EU needed to save face by delivering on the international commitment and leadership role that it had taken (Jordan et al. 2010; Schreuers and Tiberghien 2007). Both civil servants at the European Commission and political decision-makers pushed for renewable energy policy and began to develop policy proposals for what became the Renewable Electricity Directive (EU 2001) and the Bio-fuels Directive (EU 2003a), with an indicative target of 5.75 percent biofuels in the fuel mix by 2010.

Following a reflection on and learning from the failure of the UNFCCC conference in Copenhagen in 2009 to agree on an universal and legally binding climate treaty covering all countries (Monheim 2014), the EU continued its leadership role on the international level by unilaterally agreeing to extend the expiring Kyoto Protocol in 2012 in exchange for a commitment by major developing economies to work toward a post-Kyoto agreement by 2020 (Rajamani 2012). This paved the way for the Paris Agreement to be agreed in 2015 and go into force in 2016 (Falkner 2016). Learning played an important role in facilitating the Paris Agreement based on the participants' reflecting on previous negotiation experiences (Rietig 2019b).

An important driver for greening in the CAP was the more formalized and professionalized political representation of environmental interests that has taken place since the 1990s, which provided a balance to the interests of established actors such as industries across the agricultural, energy, and transport sectors. In the case of the CAP, the influence of environmental actors increased to the point where they counterbalanced the agricultural lobby in some aspects that was seen as the most powerful and

influential actor until the late 1990s due to its close links to agricultural ministries in the European member states and the revolving doors of political representation on the European Parliament's Committee on Agriculture (ENGO 1; ENGO 2; ENGO 4; ENGO 5; ENGO 8; ENGO 9). ENGOs influenced public opinion via the media, spectacular protest, and scare campaigns, and they also networked themselves into political decision-making circles as so-called green lobbyists, thus becoming an important actor capable of countering the agricultural lobby's influence to a certain extent (as pointed out by EP 4; Industry 1; Industry 2; Industry 3; Industry 4; Swinnen 2008a).

The activities of ENGOs, the political success of green parties, emerging food scares of the 1990s such as bovine spongiform encephalopathy (BSE), and increasing awareness of and public support for animal welfare accumulated to leave an impression among the political decision-makers that there was overall societal support for greening agricultural practices and a demand to deliver on public goods. Such key public goods include preserving the landscape, providing environmental services, and supporting sustainable development in a manner that preserves critical environmental capital for future generations. At the same time, there was strong criticism of agricultural intensification and wasteful use of tax money for a policy that distorted world food markets and required even more financial resources to dispose of overproduction (EC 24; Swinnen 2008b, 142). Environmental actors also facilitated the increasing of public support for renewable energy policies; however, they played only a secondary role in the early development of renewable energy policy between the 1970s and 1990s.

Renewable energy policy (and with it biofuels policy) was also motivated by wider developments in the sociopolitical landscape and overall popularity until 2007. Renewable energies were framed by decision-makers predominantly as alternative energy sources to fossil fuels, which carried the hope of reducing the high dependency on politically unstable alliances with countries in the Organisation of Petroleum-Exporting Countries (OPEC) and the former Soviet Union. Renewable energies also promised local economic development, as their deployment had a more local character than did the import of fossil fuels. These two factors, combined with the fact that renewable energy faced less major opposition than, e.g., nuclear power, prompted the European Commission to conclude that there was a wider societal consensus in favor of renewable energy's overall desirability (EC 1). This perception of a wider consensus also had a positive effect on local decision-makers, who supported policies that facilitated the uptake of renewable energy and grouped together in transnational city networks such

as the Covenant of Mayors and the International Council for Local Environmental Initiatives (ICLEI), which were also supported by the European Commission (EC 1). Biofuels and biomass, which have been used as alternative fuels in agriculture since the 1980s, played a special role as a means of local economic development and energy security.

Furthermore, the greening of agricultural policy emerged as a necessity in the 1980s, and especially the 1990s, to sustain public support for Europe's largest transfer program of public funds. Policymakers felt the pressure to adapt the CAP before the public pressure to "scrap the CAP" (EC 24) became too strong. This was regarded by many interviewees as the most important external driver induced by the sociopolitical landscape for policy development toward greening in the CAP. The pressures in renewable energy and transport policy were similar, although the window of opportunity was defined more by understanding renewables as an opportunity for economic development and a means of improving energy security.

It is important to note that all three policy initiatives (i.e., renewable energy, biofuels, and greening the CAP) existed due to motivations other than climate mitigation. Only later, as climate change became a strong public concern (i.e., was reflected in the public mood), renewable energy and greening measures in agricultural policy were reframed as contributions to climate mitigation via low-emission energy production and increasing green vegetation as carbon sinks. The sociopolitical consensus that climate change needed to be addressed via reducing greenhouse gas emissions emerged in the mid-2000s during a window of opportunity. The economic situation was seen as favorable enough to allow for topics such as the environment and climate change to enter the political agenda. Policy entrepreneurs such as Al Gore, with his movie *An Inconvenient Truth*, succeeded in further raising public awareness of climate change and in strengthening a sense of urgency (Guggenheim 2006). The Intergovernmental Panel on Climate Change (IPCC) report (IPCC 2007) and the Stern review (Stern 2006) provided the scientific and economic evidence to act on climate change earlier rather than later. These and further developments resulted in a major shift in the wider policy landscape in support of climate change policies, and thus opened a window of opportunity for reforms (Carter and Jacobs, 2014) in the CAP and European renewable energy policy to take these changed political and social framework conditions into account.

In conclusion, the motivation for policies can frequently be found in the sociopolitical landscape. It includes the policymaker's *perception* of wider public opinion, political or societal consensus in support of a certain policy option, and wider windows of opportunity such as overall support

for climate change policies due to a higher awareness of the problem and willingness to accept regulation. A further determinant in the sociopolitical landscape is the political power of certain political parties and groups representing interests of specific nonnational actors (Ackrill, Kay, and Zahariadis 2013; Zahariadis 2013). The wider drivers for policy change *can* include developments in the sociopolitical landscape such as new actors, overall public support for renewable energy, changing social demands, and new areas of public concern, including climate change. One more recent example is Fridays for Future, a global youth protest movement inspired by the teenage social activist Greta Thunberg, who has taken a policy entrepreneurial leadership role by increasing the sense of urgency to act on climate change. Students and youth activists from across the world created public pressure via regular demonstrations starting in 2018 and continuing until the COVID-19 crisis in 2020 confined activism to the digital sphere. These shifts in the sociopolitical landscape are a motivation for actors to reflect on the changed framework conditions and subsequently to adapt existing policies or design new policies—but they are not necessarily learning.

### **When and Why Decision-Makers Learn**

Of those contributions that examined learning among individual policymakers and learning on the organizational level, the majority analyzed learning types that could be summarized as factual and experiential learning, including political learning among individuals (e.g., Braun 2009; Dunlop 2009; May 1992; Montpetit 2009) and instrumental/governance learning on the organizational level (e.g., Dunlop 2010; Dunlop and Radaelli 2017; Eising 2002; Feindt 2010; Heikkila and Gerlak 2013; Koch and Lindenthal 2011; Radaelli 2009; Schout 2009).

### **Factual and Experiential Learning on the Individual Level**

There are different aspects of factual and experiential learning among policymakers. The preexisting knowledge and experience determines how steep the learning curve of the policymaker is (for more details, see Rietig 2018a). Civil servants at the European Commission were frequently technical experts who often had decades of working experience in the policy field and/or a related educational background that was evidenced by postgraduate degrees in the policy area, including PhDs or even postdoctoral research. Their learning curve thus remained incremental, as they were adding to an already vast pool of expertise. The learning curve was much steeper for politicians such as the MEPs, particularly in agricultural policy,

where they were involved via codecision for the first time in the 2014–2020 CAP reform and EU budget negotiations (Costello and Thomson 2013). The European Parliament has maintained its track record in strengthening environmental policy despite the economic and Eurozone crises and rising populism (Burns 2019). MEPs pointed out the time and workload constraints they were under and their resulting inability to acquire expert knowledge on the issue.

In this sense, the individual learning among MEPs was very similar to the way that individuals in management positions at the European Commission learned who had limited previous knowledge and experience in the policy field. These individuals predominantly learned by being involved in the process, listening to their technical experts in meetings with representatives of other European institutions or external actors. Learning among managers and technical experts was thus different. While the technical experts added to their knowledge and experience by reading detailed technical scientific studies (e.g., on carbon accounting) and specifications for technologies such as heat pumps and were engaged in energy modeling exercises, the managers called on their experts to represent the European Commission in meetings with other policymakers. By being involved in the negotiations and listening to their experts, the managers gained experience and accumulated factual knowledge around the technical and political arguments, as well as rationales for proposing a certain course of action. Consequently, it can be concluded that individuals engaged in factual and experiential learning while being involved in the policymaking process, arguing and defending their positions, and discussing with other actors the scientific bases of reports and studies.

The biofuels aspect of the RED demonstrates that the degree to which scientific knowledge was contested also influenced individual learning. The contested knowledge resulted in a more intense factual and experiential learning process among the individuals involved, as they needed to find scientific studies to back up their (politically predetermined) arguments and to defend their proposed course of action by explaining scientific data to the opposing coalition. With the first reform to the RED in the form of remedying the negative effects of biofuels in terms of indirect land use changes in 2015, as well as the second reform in 2018–2019 for the period between 2020 and 2030, the actors involved in this process continued to debate the technical details of carbon accounting and land use changes. This debate was less focused on broader political considerations than on knowledge-based aspects, which required policymakers to understand the methodology behind the scientific studies, which provided different results



depending on the modeling approach taken. Thus, they were involved in an intensive factual and experiential learning process that was described by a key member of the policymaking community as “going to the University of Biofuels” (EC 5). These differences in how individuals learn during policymaking based on their roles and positions remain underexplored in the relevant literature, given the predominant focus on learning on the organizational level (e.g., Dunlop 2010; Feindt 2010; Koch and Lindenthal 2011; Radaelli 2009; Schout 2009), on management reforms and its administrative consequences (Bauer 2008), or on comparative survey research (e.g., Montpetit 2009). Exceptions include Page and Wouters (1994), who provided details on the educational backgrounds of EU policymakers in their study on political leadership and bureaucratic politics in Brussels; and Dunlop (2009) and Montpetit (2009), who compared learning among policymakers in the EU and the United States, but without paying particular attention on how their role influenced their learning.

### **The Type of Belief Matters: Policy Design and Policy Detail Constructivist Learning to Protect Deeper Beliefs**

Deeper beliefs and policy design beliefs were more difficult to change than an addition in knowledge or experience, and thus they can be regarded as fairly stable. Individuals even went so far as to engage in factual and experiential learning, as well as political maneuvering, in order to avoid having to change their deeper and policy design beliefs. They also preferred to engage in constructivist learning by adapting their policy detail beliefs to satisfy society’s wider policy preferences. These findings follow the academic literature on the Advocacy Coalition Framework (ACF), which emphasizes how virtually impossible it is for deep core beliefs to change (Sabatier 1988; Sabatier and Jenkins-Smith 1993; Weible, Sabatier, and McQueen 2009). Deeper beliefs, however, are weaker than deep core beliefs, but stronger than Sabatier’s policy beliefs. The empirical data suggests that there is a category of beliefs between the absolutely stable deep core beliefs (i.e., a person’s fundamental understanding of the world), and how overall policies should appear to address a specific policy problem. There are beliefs that are deeper than this, which are based on a person’s opinion about whether global problems such as climate change matter (deeper belief) and whether they should be addressed via policy (policy design belief) and what exact policy instrument should be used, such as emissions trading (policy detail beliefs; see chapter 2).

Sabatier and Jenkins-Smith (1993) also pointed out that individuals change their secondary beliefs (i.e., policy detail) beliefs to protect their

policy beliefs, and especially their deep core beliefs. Actors adapted their policy detail beliefs to changing wider sociopolitical circumstances in order to protect their policy design and deeper beliefs about the necessity to maintain the CAP, and thus they were willing to introduce increasingly ambitious greening measures over several reform cycles. The other dimension of constructivist learning on the individual level includes the extent to which deeper and policy design beliefs are formed over the long term and how they change parallel to wider changes in society's policy preferences and deeper shifts in beliefs within the sociopolitical sphere.

This is the key link that was missing in the previous contributions that conceptualized learning as shifts in the sociopolitical landscape (e.g., Feindt 2010; Nilsson 2005; Nilsson and Eckerberg 2007). Mere shifts in the public mood and wider political, problem, and politics streams (Kingdon 1995) can be interpreted as learning themselves less than as drivers for learning. These shifts in the sociopolitical landscape, however, can result in individuals' changes of beliefs, and thus constructivist learning, provided that the individual *reflects* on these inputs. What frequently happened, however, is that the driver in the sociopolitical landscape did not lead to constructivist learning, but rather to factual and experiential learning aimed at instrumentalizing the policymaking process to achieve predetermined objectives, also referred to as political and instrumental learning in the literature (e.g., Radaelli 2009; Zito and Schout 2009) that *appeared* to be constructivist learning.

In line with overall shifts in the sociopolitical landscape, key actors pointed out in interviews that they had reflected on the evidence provided by the IPCC and publicized by such media as *An Inconvenient Truth* (Guggenheim 2006). That movie's key message was that climate change exists and is an increasing problem that needs to be urgently addressed by policy. This can be understood as the formation of a policy design belief on the individual level that something needs to be done about climate change. This rather abstract conviction increased policymakers' willingness to reflect on policy detail beliefs regarding the exact policy design. Policymakers who adapted their policy design beliefs in the 2010s reported the adoption of the Paris Agreement in 2015, the Fridays for Future student protests in 2019 and the increasing number of climate-related weather extremes such as droughts, flooding, and tropical storms and wildfires as crucial events leading to *reflection* and subsequently changing beliefs on climate change.

Yet it is important to keep in mind that agricultural and transport policy have only limited inherent links to climate policy, with their primary objectives of providing sufficient quantities of food or facilitating the transport of people and goods at a reasonable price and quality. There was pressure

both on DG Agri and DG Energy to integrate climate objectives into agriculture and energy policy due to overall societal demands. In the case of the CAP, key actors pointed out that it was important to take preemptive steps to maintain an overall social and public acceptability of Europe's largest subsidy program. This required them to listen not only to the demands of farmers, but also those of environmental and social NGOs representing citizens (i.e., taxpayers' and consumers' interests). Key actors thus understood the importance of changing the policy to satisfy the interests "of the other 97 percent" (EC 24). This can be understood as a change in policy detail beliefs among key actors: policymakers changed their perspective on how a specific policy instrument should look and which stakeholder group it should primarily benefit. In the RED, the overall reframing of renewable energy as climate mitigation placed new demands on policymakers who understood renewable energy as equally serving the objectives of energy security, economic development, and climate mitigation.

This seemingly constructivist learning on the individual level in terms of changing policy detail beliefs is instrumental learning, as the overall policy design belief of policymakers did not change because they were still primarily worried about having a policy framework that facilitates agricultural production, food security, and the secure provision of affordable energy. Although most key actors developed a policy design belief since the 2000s that something needed to be done about climate change, and thus they were more willing to integrate climate objectives into their own policy area so long as it did not contradict their actual policy design beliefs, this policy design belief did not emerge as the dominant driver. Key actors pointed out instead that it was important to integrate environmental and climate objectives to maintain enough public legitimacy and acceptability for the continued existence of the CAP and to strengthen renewable energy policy. Thus, the change in policy design beliefs over the medium term to integrate environmental and climate objectives into the CAP and energy policy can be attributed to the instrumental learning undertaken to preserve the CAP as Europe's largest and oldest subsidy program as the primary motivation and as the conflict in policy design beliefs among renewable energy policymakers who regarded energy security and rural development as equally important to climate mitigation.

This may be a particularity of the CPI focus inherent to the selection of case studies. In all cases, governmental organizations were required to integrate climate and environmental objectives into their core business. In the biofuels case, the objective of reducing greenhouse gas emissions was followed so long as it coincided with the objectives of improving energy

security and supporting economic development, the other two equally important objectives. After the scientific evidence regarding the mixed climate performance emerged and the environment-focused coalition changed their policy detail beliefs in line with their deeper beliefs of principled environmental and climate objectives, the underlying but diverging deeper beliefs resurfaced beyond the shared policy design belief that climate mitigation is important. Faced with a choice, the economy-focused coalition refocused on their other two core objectives: namely, energy security and rural economic development, which were still uncontested and could be furthered by a 10 percent target of renewable energies in transport, even if it was a de facto target of 10 percent biofuels given the technological limitations.

Ultimately, these case study findings point toward a wider trend, as they confirm what Radaelli (2009) and Koch and Lindenthal (2011) discovered when they concluded about instrumental and political learning in the European Commission as responses to the requirement to take into account the findings of regulatory impact assessments (Radaelli 2009) or comply with demands for EPI (Koch and Lindenthal 2011). In particular, the similar finding of Radaelli (2009) on the use of regulatory impact assessments to inform policy choices, as well as May (1992) on the dominance of political learning resulting in policy failure in several case studies across policy areas, indicate a wider relevance of these findings beyond CPI toward other policy areas that are faced with conflicting objectives.

### **Situating the Empirical Findings in the Wider Context**

In the case studies examined in this book, experiential and factual learning among individuals was especially dominant due to their involvement in the policy process. Constructivist learning as changes in beliefs based on experiential or factual learning remained rare. These findings fit within the larger picture of previous findings in the literature, while offering a novel interpretation and fresh perspective.

Koch and Lindenthal's findings (2011) could be interpreted as suggesting that the directorate generals for Energy and Transport (DG TREN/from 2010 DG Energy), as well as DG Enterprise, engaged in nonlearning and experiential learning when they were confronted with DG Env's increasingly institutionalized EPI measures, which invaded and partly contradicted the other directorate general's core measures. Actors refused to reflect, ignored orders, or engaged solely in lip service when following orders. These findings are closely related to defensive avoidance, explained in detail by Janis and Mann (1977), and political learning in order to protect deep

core and policy beliefs, emphasized by Sabatier (1987; 1998) and subsequent literature reviews (Bennett and Howlett 1992; Zito and Schout 2009).

The findings by Dunlop (2010) on dominant single-loop learning, which was used and conceptualized linking back to the organizational learning literature (Argyris and Schön 1978), were confirmed by the interviewees involved in the biofuels controversy that evolved from 2007 onward after Dunlop's analysis ended. They emphasized experiential and factual learning individually and on the organizational level, including getting better at using tactics to defend their objectives against the other coalition in the decision-making process within the European Commission and among the European institutions. Dunlop (2010) offered an interesting interpretation to the decision by the UK Department for Transport to ignore the scientific evidence on the negative climate effects of first-generation biofuels by justifying this behavior as single-loop learning by doing to grow the biofuels industry, and thus gain a competitive advantage on more climate-friendly second- and third-generation biofuels from nonfood crops. She also pointed out that this type of single-loop learning is more feasible for governmental organizations than the disruptive double-loop learning of changing objectives.

The empirical findings of the biofuels controversy of 2007–2018, however, show that this is the case only so long as there are no competing coalitions as a result of one group changing its goals and policy detail beliefs about policy instrument design based on the new scientific evidence. This reluctance on the part of the economy-focused coalition to act on the new scientific evidence (and thus to engage in what Dunlop refers to as double-loop learning) led to the controversy, which required the secretary general of the European Commission as a policy broker to intervene and force a policy outcome—which thus was not the direct result of learning. In turn, the policy outcome of the RED resulted in the need to reform the biofuels component in 2012 by limiting the indirect land use changes of first-generation biofuels. This became more difficult in 2012 than in 2008–2009, as in the meantime, member states heavily invested in biofuels, farmers found a lucrative side business to food production, and the biofuels industry has a stronger lobby to defend its interests with the support of the agriculture lobby. This time delay thus resulted in a path-dependent policy favoring the continued use of first-generation biofuels as vested interests formed (Rietig 2018b).

As a consequence, had constructivist learning occurred between 2004 and 2007 when the new scientific evidence emerged, the policy outcome might have been different enough to avoid the strong uptake of first-generation biofuels by the industry and the strong economic interest in

maintaining first-generation biofuels given the heavy investment by member states, farmers, and the grown biofuels industry. Thus, the implications of the case study on biofuels are that Dunlop's normatively good single-loop learning-by-doing contributed to a politically delicate situation and controversy that strengthened the path dependency of the 2003 Biofuels Directive and made a change in policy outcomes very difficult to achieve in the future due to the strengthened vested interests in maintaining the new status quo of first-generation biofuels. In other words, learning by doing led to a lock-in into first-generation biofuels and hindered progression to second- and third-generation biofuels, with expectedly less negative impact on climate mitigation. Thus, there are links to what Levin et al. (2012) refer to as sticky policies, yet on the side of unintended consequences. Feindt's (2010) focus on wider shifts in the CAP make a comparison with the findings on the individual and organizational levels difficult, as this aspect was not included in his empirical findings. This makes the discussion of the expert background of key actors in the CAP and their relevance to learning a novel contribution. The contributions in Swinnen (2008a) pointed toward the importance of policy entrepreneurs but did not link their behavior to learning.

### **Factual and Experiential Learning as Normal Learning**

Factual and experiential learning among individuals can be regarded as part of the European policymaking process in both the RED, with its biofuels component, and the greening of the CAP. It is, however, a normal or routine occurrence that is inconsequential for the policy outcome (Rietig and Perkins 2018). Yes, individuals did learn, and the more expertise they had and the more sophisticated their understanding of maneuvering through the policymaking machinery was, the better they were able to influence the policymaking process in line with their political objectives. But in that sense, learning remained instrumental to achieve a certain objective such as developing a policy proposal and riding the rapids of the political decision-making process well enough to fulfill one's job description.

Most of the policy learning literature explores this aspect of learning when it talks about instrumental learning (May 1992), political learning (Radaelli 2009), social learning (Feindt 2010), government learning (Bennett and Howlett 1992), or compliant/noncompliant single- and double-loop learning (Koch and Lindenthal 2011). The commonalities of this dominant learning type in the policy learning literature is the strategic use of knowledge and experience to achieve one's policy objective without the necessity of reflecting on the input or changing one's underlying beliefs. However, there is more to learning in policymaking than simply learning

how to play politics better. The next section thus examines the conditions under which learning is transferred to the organizational level and is potentially reflected in the policy outcome as a key contribution of this research.

### **Conditions for Constructivist Learning**

The empirical findings point toward a number of learning conditions that match the key expectations from the Learning in Governance Framework (LGF) presented in chapter 2. Learning can occur in the complex interactions of the individual and organizational levels, which are further influenced by wider developments and major shifts in the sociopolitical landscape. For constructivist learning to occur in the policymaking process, the policymaking conditions need to support reflection on input and a change in perspectives. This can be hindered by several factors, such as defensive avoidance, bargaining tactics, and power politics. It can also be hindered by an organizational culture that does not support reflection and changing perspectives or is not open to changes based on input by the individuals who have learned. Thus, the link between the individual and organizational levels is very important for learning to be transferred into the policy outcome. If there is a disconnect between those two levels, individuals may well have learned, but the organization (and ultimately the policy outcome) do not reflect this change in beliefs, including policy detail beliefs on how a policy instrument should be designed. It is normal, and to a certain extent to be expected, that individuals who are involved in a policymaking process learn in terms of acquiring new knowledge and experience, thus engaging in factual and experiential learning. In some cases, this may be sufficient to result in a policy change, while in others, only constructivist learning in the form of changed deeper, policy design, and policy detail beliefs continues to the organizational level, where it results in a policy proposal that is adopted by the other governmental institutions. However, especially constructivist learning can result in policy change if the modified individual beliefs spill over to the organizational level as key actors considerably influence the policymaking. This points to the central role of leadership by policy entrepreneurs in achieving policy outcomes and facilitating learning processes.

It was important to differentiate in the empirical analysis between preformed deeper beliefs and newly formed policy design beliefs and to control for preexisting beliefs, green or otherwise. Key actors in the CAP and RED case studies maintained their beliefs and subsequently tried to align the policy outcome with their preexisting beliefs. Therefore, the time frame of analysis is important. In a long-term time frame beginning in the 1970s,

individuals learned and changed their deeper beliefs parallel to the changes of what society regarded as important in the sociopolitical landscape. The overall concern about energy security in the 1970s in the face of shortages had an impact on society and policymakers alike, which resulted in a willingness to search for alternative fuels. The shift toward the public goods model in the CAP also coincided with a strong public concern about food safety and environmental degradation in the 1990s, which also marked the entry of ENGOs. Policymakers reflected on these wider sociopolitical changes and changed their individual beliefs accordingly. The third major instance was the mounting scientific evidence on climate change and its emergence in the sociopolitical landscape between 2006 and 2007 marked by Hurricane Katrina, the Stern Review (Stern 2006) on the economic costs of climate change, *An Inconvenient Truth* (Guggenheim 2006), the publication of the IPCC report (IPCC 2007), and the award of the Nobel Peace Prize to the IPCC and Al Gore for raising awareness of climate change.

These shifts in the sociopolitical landscape also illustrate the importance of windows of opportunity. These were further conditioned by outside factors such as the economic situation. The economy-focused coalition was strengthened as the window of opportunity for climate policy and CPI closed with the economic and Eurozone crises (Rietig 2019a), which subsequently lowered the priority of environmental and climate policies (Bürgin 2015). Nevertheless, key aspects such as the conditionality of 30 percent of farm payments on compliance with greening measures and the dedication of 20 percent of the EU's 2014–2020 budget to cobenefits on climate measures were maintained in the policy outcomes, and thus point to path dependencies of policymaking beyond those windows of opportunity. The global public and political interest in climate change began to increase again in 2015. Large-scale political mobilization and civil society activism (Chan et al. 2019), learning within the UNFCCC (Rietig 2019b), and increased economic competitiveness of renewable energies (Meckling 2017) and supportive political leadership united in a low-carbon economic development narrative that facilitated the Paris Agreement on Climate Change.

As weather extremes provide firsthand evidence of climatic changes around the world and the fifth IPCC report (IPCC 2014) warned of more rapid climate change than initially projected, the Fridays for Future youth movement around Thunberg and other activists pushed climate change back to the top of the political agenda. Numerous cities, and increasingly countries such as the United Kingdom, are declaring climate emergencies to increase their ability to implement ambitious climate policies. In the summer of 2019, the German minister of defense, Ursula von der Leyen,



was elected by the European Parliament as the new president of the European Commission on the promise of making addressing climate change a key priority. Consequently, the 2006–2007 window of opportunity, which remained open for an unusually long time (Carter and Jacobs 2014), was succeeded by a shorter window of opportunity in 2015 around the Paris Agreement on Climate Change and a more recent one in 2019 around the Fridays for Future youth protests in response to weather extremes in 2018 ranging from wildfires across the United States to droughts in western and central Europe to typhoons and flooding in Asia.

The time frame is linked to a further crucial condition for learning to occur and to be transferred into the policymaking process—and ultimately the policy outcome. This depends on the political feasibility of actors' newly formed policy detail beliefs within the dominant coalition. If these actors encountered a window of opportunity and used it to gather the necessary political support for their policy proposals, the learning was likely to be reflected not only in the policymaking process, but also in the policy outcome. Thus, learning can be regarded as not trivial for the policy outcome, which results in two key findings: constructivist learning in the sense of changes in beliefs should be free of any normative judgment regarding its desirability, and pre-held deeper beliefs can also have a strong influence on the policy outcome.

Some of the actors within the economy-focused coalition held preexisting green deeper beliefs, which were formed early in their personal development. These can be based on a childhood in the countryside, and thus intensive exposure to nature and animals, which led these individuals form deeper beliefs on the intrinsic value of preserving the environment. In particular, a large number of key actors in agricultural policy emphasized that they grew up on family-run farms or were farmers themselves, and some of them still maintained their farm on a part-time basis. The deeper beliefs of these individuals could be characterized as attaching great importance to environmental sustainability as the prerequisite to safeguard natural resources for future generations and sustainable farming practices to ensure soil fertility.

The second group formed its deeper beliefs in favor of environmental sustainability in the 1970s, when they participated in environmental and antinuclear movements, contributed to the academic debates surrounding the limits to growth, or participated in the UN World Summit on Sustainable Development. If learning is analyzed within a long-term frame, and these individuals did not fall into the first group, their deeper beliefs most likely changed from a neutral/indecisive point of view toward green beliefs. Their professional career may have led them subsequently into positions that were aligned with these green deeper beliefs (i.e., within the environment-focused

coalition) in policymaking. If, however, they were working for an organization or governmental department that had other objectives not always cobeneficial for the environment, individuals with green deeper beliefs also ended up in key decision-making positions within these not primarily green organizations. This was partly the case in the greening of the CAP in the reforms during the 2000s, and especially in the CAP and EU budget negotiations on the side of the European Commission in 2014–2020. Individuals in the first and second group, who were already holding deeper beliefs, also aligned their policy design and policy detail beliefs to reflect their deeper beliefs, and thus shaped their policy proposal to reflect a wider consensus in favor of greening—which also coincided with their own beliefs.

The third group included individuals who changed or formed their beliefs based on the evidence on climate change presented to them between 2006 and 2007, especially if they had no prior involvement with environmental or climate policy. Some members of the economy-focused coalition in the RED case study and of the status quo, as well as the moderate reform coalition in the CAP can be regarded as having formed or changed their deeper beliefs following the overall change in the sociopolitical landscape toward concern about climate change. They thus engaged in constructivist learning by reflecting on the evidence on climate change provided to them by the media and the IPCC, and concluding that climate change existed and was a problem (deeper belief), and that something needs to be done about it in the form of policy (policy design belief), with specific ideas about what this policy should or should not look like (policy detail beliefs). In this case, constructivist learning occurred on the individual level as a result of changes in the sociopolitical landscape.

There were enough cobenefits for members of the economic development coalition in the RED case to support climate change objectives, especially as they also matched their other policy design beliefs about energy security and economic development. But when the scientific evidence on the negative climate performance of food-crop-based, first-generation biofuels emerged, the economy-based coalition could not change their policy detail beliefs, as they would have conflicted with their policy design beliefs on energy security and economic development, which emphasized the benefits of first-generation biofuels. This misalignment in beliefs led key members of this coalition to engage in defensive avoidance to protect their policy design and policy detail beliefs.

In the case of greening the CAP, the key actors at the European Commission within the economic development focused coalition already held green deeper beliefs and the policy design belief that they also needed to do something

about environmental degradation and climate change—while trying to preserve and justify the continued existence of the CAP. The key individual's green deeper beliefs resulted in an intrinsic drive to make Europe's agricultural sector greener via policy instruments that introduced greening mechanisms into the CAP. Consequently, both learning and the content of the policy change were not purely instrumental or in reaction to external pressures, but they coincided with these intrinsic factors in a win-win constellation.

These findings show that constructivist learning of individuals needs to be benchmarked against the deeper beliefs of individuals, not against an externally imposed objective such as a principled priority of environmental protection, climate mitigation, economic development, or social objectives, which is the dominant approach in the literature (e.g., Feindt 2010; Koch and Lindenthal 2011; Nilsson and Eckerberg 2007). Consequently, constructivist learning on the individual level can have an impact on the policy outcome and can be measured based on how well the policy outcome reflects the deeper beliefs of individuals. Another aspect consists of the role that an individual played (whether for pay or not) on the wider organizational level and how well learning on the individual level was transferred to the organizational level, where the policy outcome is negotiated and decided. In that sense, the link between those levels is crucial for connecting learning to a policy outcome, as illustrated by March and Olsen (1975).

### **Transmission of Learning into the Policymaking Process: The Key Role of Policy Entrepreneurs**

The findings indicate a high relevance of leadership by policy entrepreneurs to facilitate or hinder learning. In the CAP reforms, policy entrepreneurs played a key role in getting decisions in favor of CPI adopted by the European Commission. These were actors in high administrative positions who held strong personal convictions in support of environmental objectives and climate mitigation (EC 14; EC 15; EC 16; EC 17; EC 18; EC 21; EC 22; EC 24). In the case of European biofuels policy, a policy entrepreneur was highlighted from a normative environmentalist perspective as an example of how an individual (EC 9; ENGO 1; also discussed in detail by Sharman and Holmes 2010) can push through decisions that are not necessarily beneficial for the environment. Yet the evidence suggests that policy entrepreneurs achieved their outcomes without teaching other actors (Bomberg 2007), and thus persuading them (Risse 2000; Riddervold 2011), but rather due to their sophisticated strategizing and steering in the policy process. In this section, I discuss how the findings match the expectations

of the empirical literature on learning in the EU, which has so far paid little attention to the role of individuals acting as policy entrepreneurs, as well as their central role in both transferring learning from the individual to the organizational level and bringing about a policy outcome that may be owed to other explanations besides learning.

### **Policy Entrepreneurs in European Policymaking**

Policy entrepreneurs proved to be crucial factors for the transfer of learning from the individual to the organizational level, as well as for achieving a policy outcome. The commissioners and their senior staff were the key actors in the CAP case study. They developed the policy proposals and steered them through the policymaking process, as indicated by several key actors (Pirzio-Biroli 2008; Swinnen 2008b; Swinnen 2015). In the case of the RED, key individuals within the economy-focused coalition emerged as policy entrepreneurs who also guided the policy process toward its outcome (Sharman and Holmes 2010). Numerous actors were involved in the policymaking process, such as experts, lobbyists (businesses, unions, NGOs), civil society, other government departments from the national, state and local level, MEPs and political parties (Bomberg 2007; Stone 2000, 2001; Zito 2009). Some of these actors had well-developed networks and acted as policy entrepreneurs because they were personally convinced that their policy proposal was the right thing to do, and they possessed the necessary expertise and credibility to persuade other actors—or at least the network—to call upon such experts. Here, the central importance of knowledge in policymaking became visible (Dunlop 2009; Radaelli 1995; Zito 2001).

Policy entrepreneurs were crucial for the policy outcome and either supported or hindered learning, also depending on their leadership style. They had the option to support learning on the organizational level by trying to teach the other actors and change their beliefs via arguments (Bomberg 2007). Yet little empirical evidence was found in the case studies to support this expectation. In the CAP, key actors steered the policymaking process using negotiation tactics to “push through” (EC 15) a proposal of which they were convinced that it was the “right thing to do” (EC 24), but there was limited evidence that they actively tried to persuade other actors of their policy proposal. Furthermore, the key policy entrepreneurs did not act as neutral policy brokers, but as members of an advocacy coalition (Sabatier 1998; Tallberg 2004; Warntjen 2008; Weible et al. 2009). Thus, there was also little empirical evidence to conclude on learning brokers. The evidence instead pointed toward the dominance of traditional negotiation and bargaining tactics, as well as a strategic steering of the policy process based on

the policy entrepreneur's experience with the subtleties of the policymaking process (Braun 2009; Howard 2001; Krause 2003; Pirzio-Biroli 2008).

In particular, the target of mainstreaming climate objectives into the EU 2014–2020 budget put forward by DG Clima, as well as the subsequent adoption of this objective in the EU budget (European Council 2013), could be seen as an instance where policymakers learned based on DG Clima's role as a learning broker (Rietig and Perkins 2018). However, the decision to propose a 20 percent target for CPI in the EU budget was successfully introduced into the European Commission's budget proposal only at the final decision-making stage in the College of Commissioners, partly due to the leadership skills of the European Commissioner for Climate Action Connie Hedegaard and her ability to be very convincing (EC 6; EC 14; EC 15; Rietig and Perkins 2018). This precedent of having a 20 percent mainstreaming objective in the 2014–2020 EU budget could have offered a route toward learning on the level of member states where significantly higher public financial resources are concentrated. However, it resulted in a certain path dependency for the 2021–2027 EU budget, which again contained the target of mainstreaming climate objectives into 30 percent of the EU budget, up from 20 percent (EC 2018; Rietig 2021).

This policy innovation of dedicating a certain share of the EU's budget to achieving cobenefits for climate action may be an example where learning can occur in the next reform cycle after the innovation was initially introduced in the 2012–2013 negotiations. At that time, actors failed to learn, as there was no reflection on the policy innovation that could have triggered learning processes (Rietig and Perkins 2018).

The example of Commissioner Franz Fischler's introduction of stronger greening measures into the CAP (Nedergaard 2008a; Pirzio-Biroli 2008) and the European commissioner for climate action's push for dedicating 20 percent of the EU budget, with the CAP as the largest component, to mainstream climate objectives (Rietig and Perkins 2018) also demonstrated how policy entrepreneurs can embed a new objective into the "institutional machinery" (EC 24). In that specific instance, not much learning occurred among other individuals involved when the policy entrepreneur "simply pushed things through" (EC 15):

But I think by and large I would not see that much learning because this is a very, how should I call it, this is a machine which works for many, many years and it is always the same. In the Council, you have different ministers but the principle is the same, the way we work with member states. I think all the players know each other extremely well, in this field, in this industry, there is a kind of a family, it is a large family, but it is a family. There are a lot of very strong personal

relationships among the players, which also help to find solutions and they can open the talk without being always in a formal negotiations. So that's the reason. I don't think there is necessarily a learning process involved in this; it's more about improving the proposals towards whatever is needed and showing the necessary flexibility to adapt to situations. (EC 24)

This provides a link to the organizational level: It can be regarded as constructivist learning on the organizational level in the medium term if the policy entrepreneur is successful in changing policy design beliefs on the organizational level. In the empirical example, Commissioner Fischler is regarded by the actors involved as the decisive policy entrepreneur who embedded greening and environmental objectives into the CAP. This resulted in a new policy objective, originating from the policy entrepreneur, which will persist even after this individual leaves office.

Thus, a decade later, it appears as if not "that much learning" (EC 24) happened, as the institutional machinery has adapted to the earlier integration of learning via the policy entrepreneur. Once embedded into the organizational level, the course is being continued in a certain path dependency as part of the institutional machinery, or even an additional institutional objective. The individuals involved in the subsequent policy reforms either changed their underlying beliefs or were simply following the path laid out by the policy entrepreneur in one of the earlier policy reform rounds. This can also be observed in the 2018–2019 negotiations for the 2021–2027 EU budget, which reintroduced an increased climate mainstreaming objective of 30 percent, even despite the lack of reflection and subsequently learning in the 2012–2013 negotiations for the 2014–2020 EU budget. Regardless, the change in policy design beliefs within the institution results in a new path dependency and stable policy equilibrium.

Factual and experiential learning can also be used strategically to outsmart other actors in the decision-making process (Koch and Lindenthal 2011; Radaelli 2009). In particular, the European Commission plays a leading (and even a steering) role in the negotiations within the working groups in the European Parliament and the Council of the EU (Braun 2009) that goes beyond its treaty-based role (Craig 2010; Hix 2005; Nugent 2001; Sabathil, Joos, and Kessler 2008) as a neutral observer providing knowledge-based support to the European Parliament and the member states. After the publication of the European Commission's proposal, it plays a de facto steering role that opens windows of opportunity to influence and even steer the decision-making process.

In the drafting and negotiation of the European Emission Trading Scheme, factual and experiential learning was used to serve this exact purpose: to

push through the legislative proposal (Braun 2009). A small team of policy entrepreneurs within the DG Env of the European Commission achieved this by gaining support from member states and MEPs in favor of a policy proposal. The team of civil servants drafted the policy proposal on the European Emission Trading Scheme with the input of key stakeholders. The team members were very knowledgeable and had learned from the experience shared by stakeholders who had previously implemented this type of market-based policy instrument (Braun 2009, 478). It is, however, also important to note that these individuals, predominantly at DG Env, gained most of their knowledge on emission trading between 1997 and 2003 by inviting experts to share their experiences from emission-trading pilot projects. These activities enabled them to “organise the necessary political majorities among all the relevant stakeholders . . . [whereby] these individuals repeatedly found ways to speed up the policy process, to expand the room for manoeuvre and to create new latitude for other actors” (Braun 2009, 482). The findings in Braun (2009) match the empirical findings of the case studies. Given that only a few key individuals were in charge of developing a policy proposal, thereby gaining deep expertise and taking on an officially consulting role in the subsequent policymaking process on both the CAP and the RED, they became powerful negotiation partners based on their knowledge, and especially a feeling of ownership of the policy proposal they had developed. Their objective was to come forward frequently with a proposal that was as close to the negotiated final deal as possible, thereby taking into account stakeholder concerns earlier in the process rather than later.

At the same time, it is important to keep in mind that both the CPI into energy policy in the form of the RED and the European Emission Trading Scheme were results of the UNFCCC negotiations of the Kyoto Protocol, which took a market-based approach to reducing emissions with the Clean Development Mechanism. The EU accepted the deal of introducing market-based mechanisms with the objective of persuading the United States to sign on to the international treaty. Despite the US withdrawal from the Kyoto Protocol, the EU decided to implement emissions trading following the failure of the European carbon tax (Braun 2009, 472). This example illustrates that both developments in the sociopolitical landscape, which includes wider developments on the global level such as the UNFCCC negotiations, and key policymakers who act in line with their beliefs, had a decisive role in achieving policy change, and that this is not limited to the specific case of CPI but can also be confirmed for single-purpose policies.

Overall, policy entrepreneurs played a central role in steering policy proposals toward their adoption. Learning depended on how those policy

entrepreneurs acted and whether they tried to persuade other actors by teaching them of the importance of the specific policy proposal, as emphasized by Bomberg (2007), or if they steered the proposal through the policymaking process without “taking the other actors along,” but simply “pushing things through” (EC 15) with power politics, political horse-trading, and using their expert knowledge of how they can best influence the political process (Biermann 2002; Perkmann 2007; Roberts and King 1991; Stone 2004).

The case studies illustrated that the latter was especially dominant, based on previous experiential and factual learning of the policy entrepreneurs, and potentially on a previous change in deeper beliefs with a subsequent alignment of policy design and policy detail beliefs. The case studies suggest that policy entrepreneurs make strategic use of their knowledge of political dynamics and the institutional machinery to get their policy proposal adopted rather than engaging in a mutual learning process to persuade and teach the other actors by trying to change their beliefs. The empirical findings indicate a methodological aspect widely neglected in the literature: other than the policy-specific learning discovered by Braun (2009), individuals frequently had their learning experience long before they acquired the ability and opportunity to act as policy entrepreneurs in the specific policy process under analysis. Thus, there is a close link between previous learning and current power politics and political strategizing, which appear as alternative explanations for policy change—although it is based on learning in previous rounds of policymaking and would not necessarily be counted as learning in the case under analysis.

### **What Have We Learned about Learning in Policymaking?**

So how do the empirical findings described here advance our understanding of learning in policymaking? This section discusses how the empirical findings, which can be analyzed using the LGF developed in earlier chapters, improve our understanding of theoretical frameworks on learning in earth system governance. Most learning frameworks have been developed in the US context with US case studies, both in policy learning and in organizational learning (notable exceptions are the contributions made by Dunlop and Radaelli 2013; Radaelli and Dunlop 2013). The EU and earth system governance literature began to integrate learning conceptualizations relatively late, mostly out of engagement with the policy transfer literature (Benson and Jordan 2011; James and Lodge 2003) and the separate stream of diffusion theories, as well as the new governance debates (Héritier and Lehmkühl 2008; Schout, Jordan, and Twena 2010; Trubek and Mosher 2003).



### **Uniqueness of the European Union—Does It Matter for Learning?**

The EU-focused literature predominantly applied US-based theoretical frameworks on learning. These are mostly a synthesis of the concepts of single- and double-loop learning (Argyris and Schön 1978; Argyris 1976) labeled as organizational learning (Huber 1991), Sabatier's policy-oriented learning (1988), and May's (1992) political learning, and to a lesser extent Hall's (1993) first-, second-, and third-order changes labeled social learning by Bennett and Howlett's (1992) influential review article. The most EU-specific learning type that does not explicitly originate from a US-based learning theory is instrumental learning, in terms of learning about the content of new policy instruments used by Nilsson (2005), Radaelli (2009), and Schout (2009).

This learning about the content and function of more recently used policy instruments is a very common aspect of learning, however, which we would expect to find in most policymaking processes oriented toward an efficient provision of public goods. Most of the literature that examines learning at the example of EU case studies draws on US-based conceptualizations of learning and did not develop an EU-specific framework to learning. Comparative work found that learning in the EU is similar in its mechanisms to learning in the US. Thus, there are few relevant differences in learning research. Empirical comparative studies of learning in the EU and North America suggest that the EU is also moving toward an adversarial policymaking system and that policy entrepreneurs play a role in learning (Montpetit 2009):

Policy actors are inclined to learn, whether they belong to the EU or not. The results of the three tests presented in this article call for a significant revision of the theories suggesting that governance in the EU is particularly conducive to policy learning. In fact, policy development in nation-states, including North American states, features policy learning in much the same way as in the institutions of the EU. (Montpetit 2009, 1199)

Do we need an EU-specific framework to identify learning? Given that the LGF presented here is based on the wider earth system governance and public policy literature, there is little need for an EU-specific framework. On the contrary, the "So what?" question points toward the advantage of being able to apply LGF to any policymaking process than to impose unnecessary geographical limitations on it.

### **Addressing Gaps in the Policy Learning Literature**

A key finding is that the existing literature rarely explicitly connected the individual level of learning with the organizational level or the sociopolitical

landscape. Contributions usually implicitly limit their theory development and empirical analysis to one level, with most contributions focusing on the organizational level (e.g., Gerlak and Heikkila 2011; Heikkila and Gerlak 2013). Mainly the classics, such as the contributions made by Argyris and Schön in the 1970s (Argyris 1976; Argyris and Schön 1978), as well as the model developed by March and Olsen (1975), illustrate the link between learning on the individual level with the organizational level—that is, when learning is transmitted from the individual policymaker to the governmental organization and thereby enters the sphere of policymaking with the opportunity of a different policy outcome from the status quo. This link, however, has rarely been taken up and been systematically integrated into theoretical frameworks of policy learning.

The second key finding, which is closely related to the first, is the role of changing beliefs in policymaking. This also relates to the relevance of science and knowledge in policymaking (Biermann 2005; Radaelli 1995; Young 2008), as well as the importance of institutional dynamics (Young 2010). Most of the literature focused on what can be regarded as normal learning that can be expected in any governance process and labeled in the LGF as factual learning and experiential learning on the organizational level (e.g., Bernstein and Cashore 2012; Dunlop 2010; Gerlak and Heikkila 2011; Heikkila and Gerlak 2013; Koch and Lindenthal 2011; Radaelli 2009; Schout 2009). At the same time, there is a rich body of literature focusing on beliefs and power in the regime-theoretical and constructivist tradition (e.g., Keohane and Nye 1987; Haas 2000, 2004; Levy 1994; Nye 1987; Wendt 1992).

The so-called normal learning literature includes the empirical contributions that link to Bennett and Howlett (1992) and May (1992) and try to conceptualize or empirically apply learning theories labeled instrumental learning, policy learning, political learning, government learning, governance learning, and social learning. Social learning (Heclo 1974) emphasizes the importance of changing beliefs and values. Yet there are very different beliefs of varying stability, and only examining shifting beliefs results in low accuracy. The public policy literature based on Sabatier (1988) highlights different types of beliefs and provides theoretical foundations that served as an inspiration for the aspects on changing beliefs introduced in the LGF. Deep core beliefs are fundamental worldviews. Deeper beliefs are also very stable, but they can form and/or change over longer time frames. Frequently, individuals or groups use all kinds of tactics to protect their deeper beliefs and to ideally align their policy design beliefs and policy detail beliefs. Sabatier (1988) describes this kind of learning as problem-based learning, which has been found to occur frequently during the policymaking process and was

labeled political learning by other contributions (e.g., May 1992; Radaelli 2009; Schout 2009; Zito and Schout 2009).

Sabatier's distinction of beliefs has the advantage of referring to an objective (i.e., the belief that a policy *should* use certain instruments or serve certain objectives) and thus allowing an analysis of the process and the outcome. On the other hand, Hall (1993) refers to the outcome, falling short of providing for a key interim step of learning. Thus, the second specific contribution is the consolidation of the literature into the further development of constructivist learning that asks about changes in deeper, policy design, and/or policy detail beliefs on both the individual and organizational levels and shifting wider beliefs in the sociopolitical landscape, which in turn can be a driver for learning.

The third novelty is to link the importance of leadership by policy entrepreneurs for policymaking with learning theories. The specific learning literature underestimates the importance of individuals who take on leading roles as policy entrepreneurs (Kingdon 1995), policy brokers (who play a central role according to Sabatier 1988; Weible et al. 2009; Weible and Sabatier 2009), or policy middlemen (Heclo 1974) in steering the policy process and bringing about specific policy outcomes. These policy entrepreneurs are not only teachers, as suggested by Bomberg (2007), but they also can bring about an outcome without teaching the other actors and bothering to convince them by changing their policy design or policy detail beliefs.

The literature on policy diffusion (Volden, Ting, and Carpenter 2008) provides the key link to introducing policy entrepreneurs as conditioning factors for learning and an emerging policy outcome. In particular, contributions by Page (2003), Stone (2004), and Zito (2001) illustrate how relevant individuals and small epistemic communities are in policy transfer. The key determinant is to ask the counterfactual question: would the policy outcome be different without learning? Often, learning played a facilitating role but did not have a divisive impact. However, the outcome would have been different if it had not been for a policy entrepreneur whose dedication, knowledge, and clever use of windows of opportunity resulted in a change that set a policy in a new direction. Fischler's involvement in the 2003 CAP reform is a key example (Pirzio-Biroli 2008).

Most interviewees at the European Commission emphasized the collective policy entrepreneurship, a key link between the individual and the organizational levels that facilitates a policy outcome. This explanation for the policy outcome, which to a certain extent may include learning on the individual level depending on when the individual learned and formed underlying beliefs, has also been widely neglected in the policy learning

literature. Following an interview that centered on the question of learning and policy entrepreneurs, a high-level key actor at the European Commission and individual policy entrepreneur at the heart of European climate policy humbly concluded:

Well, these are exciting stories now, even for me. But of course, you know, it's a process, its not a person, you must remember that, and so there isn't an instigator of anything, it's got to be done with the blessing of your hierarchy, it's got to be done with the support of people in the DG working with you. (EC 22)

It is this combination of determination, shared deeper beliefs, and policy design beliefs toward deeper integration, sustainable development, and serving the European public (together with the experience of maneuvering the political process in a team effort) that makes the European Commission a special collective policy entrepreneur. Along with the diffuse power distribution among the European institutions similar to the US federal system (Ackrill et al. 2013; Zahariadis 2007), the European Commission and its directorate generals/cabinets sit at the center of the storm of policymaking and not only are key actors and collective policy entrepreneurs, but also have the potential to be teachers given their vast knowledge and expertise. In particular, this combination of experience, expertise, and factual knowledge makes the European Commission a powerful political body at the intersection of moderating and steering, given the ability to outsmart the European Parliament with fewer resources and some of the smaller EU member states.

In particular, the role of the European Commission raises the question of to what extent the findings on learning are unique for the EU. When zooming out of the EU as a unique governance system—which, viewed with sufficient detail, every state, federal system, or intergovernmental organization is as well—this role of the European Commission can be interpreted as an aspect of the wider organizational culture within the EU. This covers both the specific legal role of the European Commission and its policy entrepreneurial behavior, which goes beyond its formal role in the treaties (Craig 2010) as a political actor that furthers their institutional interests of deepening European integration. In that sense, the role of a strong executive that steers policy proposals through the decision-making process and has a considerable impact on the policy outcome can be either a facilitating or a hindering factor for learning, which ultimately depends on the organizational culture. The LGF allows to control for the activities of policy entrepreneurs in influencing the policy outcome and to analyze their specific role in facilitating or hindering learning as a key variable.

### Key Findings on Learning across Cases

This chapter discussed how the empirical findings from the case studies match with the expectations from the academic literature and determined what key factors matter for learning to occur, for identifying which type of learning it is and for understanding how learning affects the policymaking process, as well as the policy outcome. The case studies confirmed a number of expectations from the academic literature regarding the occurrence of individual learning, especially in the area of factual and experiential learning, that is evident in the policymaking process. However, as emphasized in the Learning in Governance Framework, it is important to raise the bar for what can be regarded as learning in policymaking. Thus, factual and experiential learning can be labeled as normal learning, as policymakers always digest new information and accumulate experience (Rietig and Perkins 2018).

The specificity of this research involves the European Commission as a particular collective policy entrepreneur that resides in a particular position of power based on their entrepreneurial spirit, shared deeper beliefs of their civil servants toward deeper economic integration and sustainable development in the area of CPI, as well as its unique wealth of knowledge and experience paired with a political objective. This finding influences learning in the EU, as it is particularly dependent on the actions of the European Commission—that is, whether key actors choose to teach the other actors and persuade them, whether they choose to use their advantage and acumen to maneuver their policy proposal through the political decision-making process using conventional negotiation tactics, or whether they choose not to act as policy entrepreneurs for various reasons. Hooghe (2012, 88) concluded on this uniquely powerful role of the European Commission as “the world’s most powerful international executive.”

However, we would have expected a connection between constructivist learning and the policy outcome. A key finding is that the temporal aspect of the analysis matters strongly for measuring so that the preexisting beliefs of policymakers must be taken into account. A further important determinant is the kind of beliefs that any member of a coalition holds. If policymakers hold deeper, policy design, and policy detail beliefs that are shared by their coalition, then they would be expected to have changed their beliefs and engaged in constructivist learning if they hold different beliefs at the end of the policy process. As the case of the CAP illustrated, however, it is possible that key individuals, who also act as policy entrepreneurs, hold deeper beliefs that are aligned with the opposing coalition that aims to integrate their objectives and thereby deeper beliefs into the

first coalition's policy area. If the key actors' beliefs and the climate policy integrating coalition's objectives match, the policy process is likely to be less controversial. The likelihood for a policy outcome that is aligned with the key actors' beliefs is also higher.

How well the beliefs of key actors are aligned with the proposed policy also has an effect on the level of conflict in the policy process and the policy outcome. Here, a key distinction between policy integration and single-purpose policies becomes evident: in single-purpose policies, the beliefs of policymakers at the European Commission are aligned with the policy proposal. The reason is that the climate policy directorate (i.e., DG Clima) was in charge of a climate policy instrument, which is its sole responsibility. It thus remained in the driver's seat (i.e., in charge of the policymaking proposal and the subsequent consulting role in the European Parliament and the Council). The level of conflict remained low in the greening of the CAP, as the key actors at DG Agri already held green beliefs that did not contradict their other policy beliefs of rural development and maintaining the CAP. This positive alignment of political objectives and beliefs enabled these individuals to play leading roles and act as policy entrepreneurs promoting an outcome they regarded as desirable.

The biofuels case within the RED illustrated what happens when the beliefs of the key actors (DG Energy) conflict with the CPI objective. The policy outcome of the RED (EU 2009a) is aligned with the beliefs of the key individual policy entrepreneurs that were in the driver's seat with the objective of maximizing energy security, economic development, and climate mitigation. After the new evidence regarding the mixed performance of some biofuels emerged, the economy-focused coalition and its policy entrepreneurs regarded the evidence as insufficient and lacking a scientific consensus to grant them principled priority over the other two objectives of energy security and especially rural economic development, which were still fulfilled. Thus the policy outcome is in line with the beliefs of the dominant policymaking coalition. The changes to the RED via the FQD (EU 2009b) can be traced back to be in line with the beliefs of the environment-focused coalition, which was in charge of the FQD. It was able to influence the RED via the links between these directives.

These cases illustrate the additional challenges that are inherent in the approach of integrating climate objectives into other policy areas. So long as the climate objectives match the beliefs of the policymakers in charge of the policy proposal—whether it be due to individual serendipitous alignment or cobenefits of the respective policy area with climate mitigation—CPI is more likely to succeed. If, however, climate mitigation does not match (or only

partly matches) the beliefs of the responsible policymakers, it is more difficult for environment-focused coalitions to influence the policymaking process, as the policy entrepreneurial decision-making structures in European policymaking are likely to work against the CPI objectives, as the biofuels case illustrates (Rietig 2018b, 2019a).

CPI requires a higher degree of coordination from all actors involved than a focus on single-objective policies such as emissions trading (Ellerman and Buchner 2007). Yet the higher level of coordination also results in more communication among the key actors. Thus, we would have expected more arguing and persuasion in the policymaking process (Risse 2000; Risse and Kleine 2010) and more changes in policy design and policy detail beliefs. However, actors rarely were persuaded by better arguments, and consensus was

**Table 7.2**

Key findings on learning across cases

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1. Policy entrepreneurs play a central role in steering policy proposals toward their adoption. Learning on the organizational level depends on how those policy entrepreneurs act and whether they try to persuade other actors by teaching them of the importance of the specific policy proposal.
  2. Changes in the sociopolitical landscape can be less interpreted as learning themselves but rather as drivers for learning.
  3. Preexisting knowledge and experience determine how steep the learning curve is on the individual and organizational levels.
  4. Preheld deeper beliefs can also have a strong result on the policy outcome.
  5. Constructivist learning of individuals needs to be benchmarked against the deeper beliefs of individuals, not against an externally imposed objective.
  6. Highly contested scientific knowledge can intensify the individual factual learning process, as individuals need to find scientific studies to back up and actively defend their positions.
  7. Individuals can go as far as to engage in factual and experiential learning, as well as political maneuvering and defensive avoidance, to keep from having to change deeper and policy design beliefs.
  8. The driver in the sociopolitical landscape does not necessarily lead to constructivist learning, but instead to factual and experiential learning aimed at instrumentalizing the policymaking process to achieve predetermined objectives that appear to be constructivist learning.
  9. An organizational culture that does not support reflection and changing perspectives or is not open to changes based on the input by individuals who have learned can hinder constructivist learning on the individual level, and especially the organizational level.
  10. Factual and experiential learning can be used strategically to outsmart other actors in the decision-making process.
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rarely reached—where there was agreement, this was due to shared preexisting beliefs across coalitions. In the biofuels case, for instance, a controversy emerged as the policy detail beliefs became misaligned. Instead of arriving at a common position during the process of negotiating and discussing the findings, policy brokers had to resolve the situation with a compromise solution. This points toward conventional theories of the policymaking process that emphasize policy brokers (Sabatier 1988; Sabatier 1998), policy middlemen (Hecló 1974) and policy entrepreneurs (Kingdon 1995) as key mediators in bringing about a policy outcome, and thus toward the relevance of taking other explanations into account when examining the influence of learning on policy outcomes. Table 7.2 summarizes the key findings, which should be tested across other empirical cases, jurisdictions, and governance levels within earth system governance and beyond to arrive at more generalizable findings on learning.



