The credibility of the Dutch pledge to implement the 2015 Paris Agreement

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Abstract

This research investigated the credibility of the Dutch pledge to implement the 2015 Paris Agreement. The focus was on the EU NDC target of 40% greenhouse gas emission reductions compared to 1990 levels, as this target needed to be strived for by all EU member states, including the Netherlands. The credibility of the Dutch pledge was analysed by looking at various dimensions that make up credibility: the rules and procedures in place, the players and organisations taking part in the creation and implementation of (new) rules and procedures, and the past performance of the various Dutch cabinets, all regarding climate change mitigation. The research design consisted of a literature and policy study, providing context for twelve semi-structured interviews with various actors, including local and regional government, multiple business sector actors, civil society actors, ENGO organisations, and climate (policy) experts. The overall conclusion was that the Dutch as a society, but especially the central government, had not been credible to a high degree. Regarding the rules and procedures, though the Dutch had set a more ambitious overall reduction target than the EU, the policy to reach these targets was not sufficiently concrete or enforced. Regarding the players and organisations, the Dutch society relatively credible as many stakeholders from a wide spectrum could participate, although some had a bigger influence than others and holding each other accountable was hard. Regarding the past performance, the policy had been unstable, making it ineffective and inefficient, and the Dutch society had been struggling in the energy transition, as the country had been home to large natural gas reserves, making it economically uninviting to switch to sustainable energy.

Key words*: credibility, Paris Agreement, climate change mitigation, rules and procedures, players and organisations, past performance*

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1. Introduction

1.1. Background

When the first commitment period of the Kyoto Protocol (1997), part of the UNFCCC (United Nations Framework Convention on Climate Change), ended in 2012, new input was needed to keep moving forward on tackling climate change. Important steps forward had already been taken during COP (Conference of the Parties to the UNFCCC) 17 in Durban in 2011, where it was decided to develop one of three options: 1) a protocol, 2) another legal instrument, or 3) an agreed outcome with legal force to follow up the Kyoto Protocol. All needed to be applicable to all Parties of the UNFCCC (Voigt, 2016). This ultimately led to the adoption of the Paris Agreement at COP21 of the UNFCCC in December 2015, which marked a new step in addressing the process called climate change. Some scholars hail the Agreement as a major accomplishment (Höhne et al., 2017; Rajamani, 2016), some are moderately positive (Clémençon, 2016a; Streck et al., 2016), and others are much more critical of what the Agreement is expected to achieve (Rogelj et al., 2016). The Agreement states the ambitious aim of managing "*the increase in the global average temperature to well below 2˚C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5˚C*" (UNFCCC, 2015, Article 2, p.3).

COP21 in Paris managed to achieve what could not be done earlier by going in with different ambitions than before – the aim to create legally binding emission targets for developed countries had been discarded, as this faced fierce opposition by the U.S. in particular (Clémençon, 2016a). Instead, countries were (t)asked to hand in *voluntary*, national targets, so-called INDCs (Intended Nationally Determined Contributions), a concept that was introduced in 2013 during COP19 in Warsaw (Voigt, 2016). These INDCs were already known beforehand, which meant everyone already knew what to expect to some extent. The submitted (I)NDCs (they become NDCs after a country has formally ratified the Agreement (Carbon Brief, 2015)) vary greatly between countries, as some set comprehensible targets, while others only set certain ranges of what could be achieved, sometimes depending on funding or technology development (Clémençon, 2016a; Rogelj et al., 2016; Van Asselt & Bößner, 2016). This means that part of the NDCs is conditional, as it depends on technological improvements and financial support, making it hard to predict whether they are really going to be implemented or not.

Even though the Paris Agreement itself should be considered as a treaty (according to the definition of the Vienna Convention on the Law of Treaties), only a small part of it can be considered as actually legally binding (Bodansky, 2016). This is because many of the provisions of the Agreement only express an aim, or they are phrased as "should" instead of "shall", which makes those provisions non-legally binding (Bodansky, 2016). The one thing that *is* legally binding is the submission of NDCs and that countries shall do so nine to twelve months prior to the COP (Clémençon, 2016a). This will need to be done every five years, after which a global stocktake assessment will be conducted, the first of which will take place in 2023 (Clémençon, 2016a; Streck et al., 2016). Another requirement is that, after each five-year period, the new NDCs need to be *at least as strong and ambitious as the previous* (Clémençon, 2016a). For a quick overview of the Paris Agreement, see Box 1 below.

COP date	December 2015, COP21 of the UNFCCC.
Aims of the Agreement	• Limit global temperature rise to 2˚C, make efforts to limit it to 1.5˚C; • Achieve a GHG emissions peak as soon as possible; • Achieve net zero emissions between 2050 and 2100.
Entry into force date	November 4th, 2016.
Ratification status	• 175 countries of 197 have ratified the Agreement (as of March 29th, 2018); • The EU ratified the Agreement on October 7th, 2016; • The Netherlands ratified the Agreement on July 7th, 2017.
Legal status	Legally binding (the Paris Agreement is considered to be a UN treaty), but few mandatory provisions.
Key provisions	• All Parties need to submit a NDC every five years, each progressing beyond the previous one; • Establishment of a transparency framework; • Establishment of expert review committee to review NDC progress every five years.

The European Union and its NDC

Within the realm of developed countries, the European Union and its members continue to push for the highest ambitions compared to other developed countries (Clémençon, 2016a). The EU was able to reach its goal set under the Kyoto Protocol, while on average, emissions were still growing in the rest of the world (Rayner & Jordan, 2016). The EU has been considered to be a world leader in climate policy and other international environmental policy since the 1990s (Oberthür & Roche Kelly, 2008). Additionally, the EU itself has claimed, for a long time, to be a leader in global climate policy (Rayner & Jordan, 2016). This leadership has degraded to some extent, as the EU has had to deal with the economic crisis, with other countries pulling back from earlier commitments (not only the US, but also Japan, Canada and Australia), and with its own industry leaders who claim they could be driven out of the EU if their economic costs become too high (Clémençon, 2016b). Emerging economies, such as Brazil and India, might not be willing to step up and become leaders in climate change policy, as they consider the already developed countries to be mostly responsible for global environmental issues (Clémençon, 2016b). Therefore, the EU, together with China, is still one of the few actors from whom active leadership can be expected, also as the U.S. withdrew from the Paris Agreement in June 2017.

The EU's first NDC states that the EU and its member states "*are committed to a binding target of an at least 40% domestic reduction in greenhouse gas emissions by 2030 compared to 1990, to be fulfilled jointly*" (EC & Latvia, 2015, p.1). All EU members will implement that same NDC, but first need to ratify the Paris Agreement individually, as the EU as a whole is a signatory, as well as the individual member states. The NDC lists seven greenhouse gases that will be included in the emissions reductions. Important pillars in order to reach this target are the EU Emissions Trading System (ETS), which was launched in 2005, and the Renewable Energy Directive, which sets the binding target that twenty percent of the total energy use within the EU has to come from renewable energy sources by 2020 (NRDC, 2016). Both are part of the EU 2030 Framework for Climate and Energy (NRDC, 2016). Although this framework is already partly in place, Fujiwara & Hofman (2016) argue that it needs to be strengthened through legislative processes in order to increase its impact.

Miguel Arias Cañete, the EU's energy and climate commissioner, has said that the EU's NDC is a fair share of what is required to keep the warming below 2˚C (Carbon Brief, 2015). Yet, the Climate Action Tracker, an independent assessment bureau, rates the EU's NDC as "insufficient", on a scale ranging from "critically insufficient" to "highly insufficient" to "insufficient" to "2˚C compatible" to "1.5˚C Paris

Agreement compatible" to "role model" (Climate Action Tracker Partners, 2018). According to their assessment, it will not contribute enough to limit the temperature increase to 2˚C, let alone 1.5 ˚C, and the target of 40% emissions reduction is "*significantly behind what is achievable and necessary*" (Climate Action Tracker Partners, 2018). Pan et al. (2017) agree with this, stating that the EU's NDC does not express enough ambition relative to its (moral) responsibility. The EU is one of the largest GHG emitters in the world (Clémençon, 2016a; Pan et al., 2017), but besides that also one of the richest groups of countries. Because of that, one could argue that they should take the lead in strengthening their ambitions within the climate change arena (Clémençon, 2016a). According to the Climate Action Tracker (2018), the 40% reduction target is only a modest increase in ambition when compared to the previous period. They claim that the EU targets, along with the implementation, will be insufficient to reach the long-term targets as stated in the Paris Agreement. This raises the question whether the EU can be considered to be a credible world leader in global climate change policy; the EU claims to be a world leader, but their set targets and implementation seem to be inconsistent with that.

1.2. Problem statement and research questions

Much has been written about the various scenarios of the NDC projections for 2030 and beyond (for examples, see Robiou Du Pont et al., 2017; Rogelj et al., 2016), but as these projections are subject to many uncertainties – including funding, technology, incomplete coverage within the NDCs, uncertain projections due to different modelling systems, and the simple fact that the NDCs could change significantly every five years – this is not the scope of this research. Instead, the focus of this research is on the implementation of the current, first NDCs, as this paints a first picture of what is being done in the present and whether this could be enough to reach the targets stated in the Paris Agreement. In particular, the implementation of the EU's NDC in and by the Netherlands is the centre of attention in this report. The focus of this research is on the Netherlands for the following reasons: (1) multiple political parties are needed to form a government, and as all have their own ideas on climate change, it will be interesting to see how they plan on reaching the EU NDC; (2) the Netherlands is an OECD country, meaning that other countries might expect countries such as the Netherlands to set a good example for others; and (3) the Netherlands, as an EU member state, can improve or decrease the credibility of the EU as a whole in terms of its global climate change leadership.

The Netherlands and credibility

The Netherlands ratified the Paris Agreement on July 4, 2017, the 149th country to do so (Trouw, 2017). The question is now how likely the Dutch government is to implement the EU's NDC properly. After the lengthiest formation process in Dutch history, four parties emerged with a new coalition and government agreement in early October 2017. This meant that the newly formed Dutch government could start to implement the Paris Agreement by introducing new policies and laws. One way to assess the Netherlands' likelihood to properly implement the Paris Agreement is by assessing the *credibility* of the Netherlands. It is important to note here that the focus of this research is on the Netherlands as a whole, and not just its national government. The reason for this is that the actual implementation of an international agreement such as the Paris Agreement goes beyond national governments; regional and local government organisations, environmental organisations, businesses, and citizens also play a part*.*

Not unlike the EU itself, the Dutch try to put themselves down as climate action leaders, *within* the EU, for example by urging the EU to increase the NDC ambition from 40% to 55% emission reduction in 2030 compared to 1990 levels. The Dutch prime minister claimed that the current target of 40% would not be sufficient to reach the 1.5 or even the 2˚C warming targets, which is why he proposed to raise

the bar to 55% (Government of the Netherlands, 2018). The Dutch coalition has set a domestic target of 49% GHG emission reduction by 2030 compared to 1990 levels, which is also higher than the EU NDC target. So at first sight, the Dutch seem ambitious and willing to combat climate change. However, the Netherlands has also been one of the EU's largest producers of natural gas, which has shaped their economy and energy mix to some extent. To illustrate this: in 2016 the Netherlands was second to last of EU members in the share of sustainable energy in the total energy mix (Eurostat, 2018). This raises the question: is the Netherlands a credible actor? They advocate higher ambitions in EU context, but what about their domestic targets and accompanying policy to reach these targets? And what does this indicate regarding targets of the Paris Agreement? That is the point of departure for taking credibility as the main concept in this report.

Credibility, or "believeableness", can be defined as the probability that policymakers will fulfil their commitment to implement their pledges (Averchenkova & Bassi, 2016). Put differently: one has credibility if others are convinced that the person is really going to deliver on their commitment (Brunner et al., 2012). Following Averchenkova and Bassi (2016) and Brunner et al. (2012), a country's credibility is relevant for two reasons: 1) it will improve positive negotiation in future climate negotiations if a country has fulfilled its pledges, as this creates trust between countries, promoting collective ambition; and 2) if the NDCs are credible, public and private investors will be more inclined to assist financially, especially when the NDC for some part depends on funding to be implemented. Worker (2016) adds that credibility of national climate action is also vital to ensure domestic compliance. As the implementation of the NDCs is work in progress that has only just started, it makes sense to look at the credibility of a state, as credibility is about expectations of *future* actions. Consequently, in this case it does not make sense to take accountability for example – a concept often assessed in international relations and governance – as a central concept, as accountability is about holding actors accountable *after* they have or have not undertaken something.

This leads to the questions such as: what factors influence the credibility of a country? What are the issues at play? Following Averchenkova and Bassi (2016), three dimensions influence the credibility at the national level, regarding pledges for the Paris Agreement. The first is *rules and procedures*, including legislation, policy and decision-making. The rules and procedures are important, as these set the base of how society operates. Additionally, the rules set by a government are also a foundation on which expectations about future objectives are based (Nemet et al., 2017). In policy, clear rules (and procedures) need to be set in order to deal with conflicting objectives, as Helm et al. (2003) explain in their paper on credible carbon policy. These conflicting objectives are especially relevant in nature and climate policy, as in these policy areas, economic and conservation, and long-term and short-term objectives often do not necessarily match. Hence, clear rules and procedures are needed to safeguard the environment. In this report, the focus will be on climate policy that is supposed to mitigate climate change, which includes energy policy and GHG emission policy, following the Dutch government (Rijksoverheid, 2017a). When in the remainder of the report is spoken about "climate policy", it regards the same policies.

The second dimension is the *players and organisations* involved, including public and private parties (Averchenkova & Bassi, 2016). This dimension is significant, as it can influence both how international agreements, such as the Paris Agreement and the EU NDC, are translated to the national level, as well as the implementation of and adherence to this translation. In the end, the participation and inclusion of all the relevant players and organisations will determine the effects of the rules and procedures. The reason for this is that when they do not comply, for example because they do not agree with certain rules, the rules will have little effect, especially if there is little enforcement by the government.

Including these actors in the process of creating rules and procedures could lessen opposition, as they will feel listened to and maybe some of their wishes will be included in the final decision. This dimension also includes public opinion. Averchenkova and Bassi (2016) include public opinion in another dimension named "norms and public opinion", but public opinion is included in *players and organisations* as the public are considered to be a possible relevant actor, through certain NGOs for example. The public opinion part is relevant, as a lack of broad support by the public rules out the implementation of adequate climate policies (Drews & van den Bergh, 2016).

The third dimension as defined in this report is *past performance*, including past commitment to international climate policy and history of policy abolition (Averchenkova & Bassi, 2016). As the performance in the Paris Agreement cannot be properly measured yet, looking at a country's performance in related agreements can provide a useful indication for public action in the future (Arts & Goverde, 2006). To be clear, the focus in this dimension is on the Dutch government, as the dimension involves the reaching of targets and policy abolition, which is ultimately the responsibility of a national government. However, the focus will be on path dependence instead of policy abolition. Path dependence also looks at the historic actions of – in this case – the government, but has a more extensive theory behind it than policy abolition, thus making it more suitable for empirical research. The "norms" part of "norms and public opinion" is also included in this dimension. Norms have links with past performance, as Averchenkova and Bassi (2016) regard norms as the *"history of active international engagement on environmental issues"* (p. 10), including commitment to initiatives that flow from the UNFCCC. The norms (of the national government), explained as (inter)national engagement in UNFCCC, are relevant, as it can be considered as a proxy for the general willingness of the Netherlands to take part in international cooperation (Averchenkova & Bassi, 2016). In this report, the focus will mainly be on national climate policy, which could or could not be directly related to the UNFCCC. The reason for this is that much of the climate policy is not necessarily directly related to UNFCCC.

Consequently, the "norms and public opinion" dimension will not be taken into account as a separate dimension, but included in dimensions two and three. The final overview of the dimensions influencing credibility is shown in Box 2. Using this focus on credibility, the aim of this research is to *determine the credibility of the Dutch pledge to implement the EU NDC (of 40% GHG emissions reduction by 2030), by investigating the Dutch rules and procedures, players and organisations, and past performance regarding climate policy*.

Box 2: Short overview of the three dimensions of credibility, as defined in this research.

Credibility	*Rules and procedures*
	Legislation, policy and decision-making
	Players and organisations
	Public and private parties
	Past performance
	Past commitment to and engagement in international climate policy, as well as the history of path dependence

Research questions

The main research question that follows from the three dimensions of credibility in the problem statement and the stated research objective is:

What is the credibility of the Dutch pledge to implement the EU's NDC target of 40% GHG emissions reduction by 2030?

In order to answer the main research question, the following sub-questions also need to be answered:

1. *How is the implementation of the EU's NDC target supported by Dutch rules and procedures?*
2. *How is the implementation of the EU's NDC target supported by the players and organisations, both individually and collectively?*
3. *How has the past performance of the Dutch government been in (inter)national climate policy and what does this indicate for the future?*

Relevance of the research

The research could contribute to the national and international (scientific) community in various ways. Firstly, the credibility framework to be applied to the Dutch case study can be further developed during the process of this research, leading to a comprehensive framework to assess a government's credibility, combining facets of multiple authors and theories. The credibility framework uses the framework created by Averchenkova and Bassi (2016) as a starting point, but is developed further in the analytical framework, and could be developed further after this research is completed by other authors.

Secondly, the EU is a group of countries that considers itself to be a global leader in climate change policy. Therefore, the credibility of one of its members – the Netherlands – can serve as an indication of how credible a leader the EU actually is. Within the EU, the Netherlands, an OECD country, is also trying to establish itself as a leader, so it is relevant to see how like the Netherland is to deliver on their pledge to fulfil the EU targets. This outcome can also be taken into account when looking at the credibility of other OECD and/or EU countries regarding the Paris Agreement or other international (environmental) agreements, and see which countries are likely to perform best and which might need a little or bigger push from the international community in order to reach the targets they pledged themselves to.

Structure of the report

The remainder of the report is as follows: first, the theoretical framework is introduced, which will in turn be linked back to the problem statement and research questions, in order to create a comprehensible base for the rest of the report. Second, a methodology follows, 1) shortly elaborating on the case study choice and the area's political system; 2) describing the ways to research the posed questions in section 1.2., by means of data collection and data analysis; and 3) elaborating on the possible limitations of the research design. Third, the results are presented, based on the document and interview analysis. Fourth and final, the results of the report will be addressed in the discussion, and based on that the report is concluded.

2. Theoretical framework

As credibility is the main focus in this research, it is important to first spend some more time with this concept; what is it exactly? According to the thesaurus, among notable synonyms of credibility are "believeableness", "integrity", "reliability", and "trustworthiness" (Dictionary.com, 2017). The concept of credibility is often used in connection with economy-related issues, such as reform and performance – a simple search on Google Scholar will point this out (a search on the 29th of March, 2018, for ["credibility" "economy"] delivered 578.000 hits, and a search for ["political credibility" "government"] only 9.320). Even though the economic and financial aspects are part of this research to some extent – in the third dimension of credibility – this is not the only important component that makes up credibility, as many scholars point out. Others use the concept of credibility in the context of ethnicity issues, while there are also scholars who use the term when they are discussing democracy. So clearly, credibility is a concept that is widely used within the political science realm and thus, clarity is needed to fully understand what the concept means in the context of this report. However, there is no clear, established theoretical framework around this concept. Therefore, I will further explain and elaborate on the various dimensions described and defined in the introduction, in order to establish a clear framework of credibility. The framework will contain two criteria for each dimension, in order to make it researchable and analysable (for a short, summarising overview, see Box 3 at the end of this chapter). Note that some concepts used in a dimension also leak through to other dimensions. This is because all dimensions are intertwined in some way, making it impossible to keep each dimension and its concept fully separate from the others. First the theoretical *background* will be introduced.

2.1. Theoretical background

Governance

There are various "umbrella" theories that apply to this report. The first is *governance*, which *"seeks to understand the way we construct collective decision-making. Its introduction as a term into our debates, coincided with a sense that existing models were failing to capture what was happening, and not providing an appropriate framing of key issues for reformers."* (Chhotray & Stoker, 2009, p.2). According to Chhotray & Stoker (2009), the existing, established means of collective decision-making processes in both the political (the state) and the economical (the firm) fields have come to be challenged. The notion of governance has been present for decades, but only started to gain ground from the end of the 1970s onwards, when interest in law and economics in corporate governance was also growing (Levi-Faur, 2012). The rise of the interest in governance also had to do with the fact that scholars started to realise that governance represented a time of changes and shifts in the meaning of government (Levi-Faur, 2012, Rhodes, 2012).

Governance is a relevant theory in this research as it links to all three dimensions that form credibility named in the introduction of this report (*rules and procedures*, *players and organisations*, and *past performance*), and because of this, looking at this theory can help to answer the research questions. This link can be shown through the "JEP-triangle" (**j**uridical, **e**conomic-managerial, and **p**olitical and civic approach), which will be used in the analytical framework. The JEP-triangle was first introduced by Nelissen et al. (2000) and can be used to assess the governance capacity of a certain governance arrangement, governance capacity being defined as *"the extent to which new forms of governance are able to successfully diminish or solve societal and administrative problems"* (Arts & Goverde, 2006, p.75). This triangle – as the name says – encompasses three approaches, which can all be linked to the three dimensions of credibility. The juridical approach relates to the first dimension, *rules and procedures*, as this mainly relates to the government and the fact that a government acts based on certain principles, such as to maintain law and order and to influence decision-making and its content

(Arts & Goverde, 2006; Nelissen, 2002). The economic-managerial approach links to the third dimension, *past performance*, as both target the effectiveness and efficiency of the execution of tasks (Arts & Goverde, 2006; Nelissen, 2002). Finally, the political and civic approach links to the second dimension of credibility, *players and organisations*, as here the focus lies on issues such as democracy and accountability. These links are explored further in section 2.2, where the analytical framework is introduced.

In the context of the JEP-triangle, it is mainly about what Nelissen (2002) calls "(new) modes of governance", which involves changes in the governing of issues, resulting from new topics emerging on the political agenda (such as climate change, globalisation, security, etc.) (Nelissen, 2002). Basically, governance evolves and takes on unique forms in each situation (Beunen et al., 2013). Although sometimes it might seem that way, governance is not only about a few people making the decisions; there are always more actors involved, who might not be involved in making the decisions, but who do need to comply with the decisions, cooperate, advise, or who might try to benefit from them (Beunen et al., 2013). As Leroy and Arts (2006) put it: *"In general 'governance' refers to the fact that steering no longer is the privilege of governmental agencies, but is de facto (and in many cases also de jure) the common responsibility of a variety of agencies, representing governmental bodies, market agencies and civil society organisations."* (p.12). This is also why I will not only focus on who is or has been involved in the *creation* of climate policy, but also on who is or will be involved in the *implementation* of it (more on that in section 2.2.). Other notions related to governance that are relevant in the analytical framework in this report are accountability, transparency, effectiveness, and efficiency, which are also explained in section 2.2.

Institutional theory

The second relevant theory for this report is *institutional theory*, which states that institutions – the norms and values that guide behaviour – are both a dependent and independent variables; institutions are created *by* actors, but at the same time they can have a significant effect on behaviour *of* actors (Keohane & Martin, 1995). According to Peters (1999), there are four important elements to institutionalism/institutions. The first, and possibly the most important one, is that institutions surpass the individual, leading to groups of individuals being involved in some form of patterned relationships (Peters, 1999). This was also linked to one of the critiques of new institutionalism on behaviourism: looking at the individual and his/her preferences alone cannot sufficiently explain collective decisions (Immergut, 1998). The second element is that institutions are stable to some extent, for example people in a commission meeting every other week (Peters, 1999). The third is that an institution needs to affect and constrain the behaviour of an individual, meaning that the people in the commission feel that the meeting is important and make sure they attend (Fioretos et al., 2016; Peters, 1999). The fourth and final element is that, within a certain institution, there needs to be certain common understanding among the individuals involved: a set of shared values, norms, and beliefs (Peters, 1999).

Within institutional theory, two main trends are relevant: old institutionalism and new institutionalism. *Old* institutionalism became important during the second half of the 19th century, when political science started to establish itself as an academic discipline (Peters, 1999). Then, political science and institutionalism focused on the state; how it influenced society, which institutional arrangement would work best in service of the state, the central, formal role of law and order, and institutional characteristics of political systems (Peters, 1999). Another component was the holistic approach, which fit with the formal approach; whole political systems would be compared, instead of examining smaller components of these systems (Peters, 1999). This approach partly returns in the *rules and*

procedures dimension in the analytical framework in section 2.2, as law and order and formal rules are still important entities in the world of today. Political science changed radically with the emergence of behavioural theory and the rational choice approach during the 1950s and 1960s (Immergut, 1998; Peters, 1999). Behaviouralists believed that the development of theory was important for political science, in order to become a "true" science (Peters, 1999). This theoretical development also led to the rational choice theory, which assumes that political actors try to maximise their rational utility (Peters, 1999).

These two new approaches (behavioural theory and rational choice theory) ultimately served as a means for *new* institutionalism to emerge, with March and Olsen being the first ones to label the movement as such in 1983 (Peters, 1999). They argued that the renewed interest in the institutional approach was caused by developments in economics (March & Olsen, 1983). They were in favour of the empirical approach in behavioural and rational choice theory, but at the same time they wanted to reinstate some of the elements of old institutionalism (Peters, 1999), and they did not believe that looking at behaviour alone could explain the dynamics of government (Immergut, 1998). They argued that "collective action" should become the centre of political science, and they recognised that politics could shape society, as well as the other way round (Peters, 1999). Here, both the state capacity and the societal actors involved in the interaction are relevant (Waylen, 2014). The recognition of the importance of this process meant that institutions – both the formal and informal ones – returned to the forefront of political science. This notion links back to the approach by Averchenkova & Bassi (2016) and the approach taken in this research; the *players and organisations* dimension is there to show whether state and societal actors really work together, increasing collective action shaped by institutions, and whether this really increases the credibility of these actors and the Netherlands as a whole.

Institutional theory can also be linked to the dimension of past performance, in particular path dependence. *Historical* institutionalism was first coined in 1992 by Steinmo et al. (1992), and "*is a research tradition that examines how temporal processes and events influence the origin and transformation of institutions that govern political and economic relations.*" (Fioretos et al., 2016, p.1). Thus, historical institutionalism focuses on temporal phenomena, such as path dependence, showing institutions may have far-reaching repercussions for the development of power in the political sphere, and the development of various characteristics of actors over the course of time (Fioretos et al., 2016). The base of the notion of path dependence lies in the notion of "critical junctures", which are important events, *"transitions that establish certain directions of change and foreclose others in a way that shapes politics for years to come."* (Collier & Collier, 1991, p.27). These critical junctures thus establish path dependence when the outcomes of critical juncture create clear pathways where it becomes increasingly hard and complex to return to the juncture and choose a different path (Mahoney, 2000), creating a lock-in. More on path dependence and these lock-ins in section 2.2.

2.2. Analytical framework

Now follows the analytical framework that is used to analyse the data. Each dimension of credibility described in the introduction is first linked to the JEP-triangle, after which two criteria are described, with one or two indicators. The reason to use criteria and indicators is that it makes each dimension more tangible in terms of what it actually encompasses. Furthermore, it provides focus for the analysis itself and thus also helps to answer the research questions.

Rules and procedures

The first dimension of credibility can be linked to the *juridical approach* of the JEP-triangle, which describes that the government and its powers are usually based in a constitution and some form of government system, be it a democracy, dictatorship, etc. (Arts & Goverde, 2006). This approach notes criteria regarding the rules: legality, fairness justice, rule of law, regulations, norms, and independence of judiciary (Arts & Goverde, 2006; Mees & Driessen, 2011); as well as procedures: equality, honest treatment, and reasonable waiting periods (Arts & Goverde, 2006; Nelissen, 2002). This approach suggests a rather top-down steering by the (central) government (Mees & Driessen, 2011), but the government is supervised by certain public bodies at the same time, e.g. a National Ombudsman (Nelissen, 2002). In this report and within this dimension, the most important criteria are considered to be *rule of law* and *fairness*.

Rule of law

Rule of law is considered to be among the most important criteria, as a government and a country's inhabitants need to respect and abide by the existing national and international laws (Mees & Driessen, 2011). Rule of law can be defined as *"a set of stable political rules and rights applied impartially to all citizens"* (Weingast, 1997, p.245). A national government has the power to *change* these political rules or *introduce new* rules at the national level. As the Dutch have recently formed a new coalition (in October 2017), this power could be used to make significant changes, also regarding climate policy. As a member of the EU, the Netherlands needs to abide by certain EU rules regarding climate and energy, such as the Renewable Energy Directive, and the Energy Efficiency Directive. However, specific climate law and policy – which will influence how an individual member is planning to reach the EU's NDC target – is a matter of national policy and responsibility. The international and Dutch rule of law does not only apply to the national government, but to everyone else within the Netherlands as well.

According to Licht et al. (2007), the most basic indicator of rule of law is *law and order*, which is about the extent to which the behaviour of the government, as well as individuals, is in line with the formal, legal rules. It is the government's responsibility to maintain the law and order (Nelissen, 2002). Although it sounds obvious that everyone should adhere to the law, this does not always happen, and thus it is not only important to see what laws and regulations regarding climate policy are in place, but also to what extent the government itself, organisations and individuals actually adhere to these laws. Therefore, as part of law and order, the actual *enforcement* of climate policy will also be taken into account.

Fairness

Fairness sounds like a vague concept, but is actually an important concept to take into account when researching climate policy. The reason for this is that fairness concerns the "*reasonable distribution of responsibilities, risks, costs and benefits between and among generations*" (Mees & Driessen, 2011, p.36). The notion of "between generations" is especially relevant when looking at climate change, as this process is always ongoing to a bigger or lesser extent, and the future situation of the Earth is influenced by what we are doing now. The notion of "among generations" is also relevant in climate policy, as different countries and companies have (had) a different impact on the climate change so far. Fairness also relates to *accountability*, a concept that will be discussed later, as part of the players and organisations dimension.

An important environmental indicator to be considered when considering fairness is the *precautionary principle* (Mees & Driessen, 2011), which justifies precautionary action when a particular material or activity could cause harm to the health of humans or the environment, even when there is no definite

scientific proof that establishes a causal relationship (Jacobs, 2014). This principle is relevant in climate change, as climate change is a complex process with a lot of uncertainty around it. This means that the application of the precautionary principle, in terms of "better safe than sorry", especially regarding long-term effects when the level of uncertainty increases, is often justified. Another indicator that applies to the national Dutch climate policy is the *polluter pays principle*. This means that – in this case – the high-polluting individuals, businesses, etc. should be held responsible for the impacts of their actions, even if they did not know the risks (Timmons Roberts & Parks, 2007). This principle is relevant, as pollution by fossil fuels has an important impact on the process of climate change.

Players and organisations

The second dimension of credibility can also be linked to the JEP-triangle, namely the "P", standing for the *political and civic approach*. This part of the triangle is about the values and structure of the political system, and includes the following criteria: representation and participation, openness and accessibility, accountability, legitimacy, trust, and the distribution of authority (Arts & Goverde, 2006; Mees & Driessen, 2011; Nelissen, 2002). This approach also regards the public-private – private meaning all non-state actors – divide and the various, possibly competing stakes of certain actors involved (Mees & Driessen, 2011). In this report, within this dimension, the most important criteria are considered to be *participation* and *accountability*.

Participation

As the focus of this report is on the credibility of the Netherlands as a whole, thus including much more than only the national government, the participation of other players and organisations is a very relevant criterion. As stated before, the actual effect of the rules and regulations imposed by the government depends on the participation of all relevant actors involved. With *participation* I mean both the participation and representation of relevant actors in *creating* and *implementing* national climate policy. By relevant actors, I mean stakeholders: those actors that have a significant interest, power, or both of these things regarding climate policy. The participation of the relevant actors in creating climate policy is relevant, as it might strengthen support for the policy in question (Drews & van den Bergh, 2016), and help to settle differences between actors by building trust and understanding (Lockwood et al., 2010; Schreurs et al., 2017). Additionally, the inclusion of multiple approaches and ideas might lead to better results in terms of policy quality. The participation in the implementation is relevant, as the implementation is the "end game" of a policy; without proper implementation, even the best policies can actually be ineffective in the end.

Another indicator to study participation is to look for so-called public-private partnerships (PPPs), which are considered to be *"agreements for collaborative governance between public actors (national governmental agencies, subnational governments, or IOs) and nonstate actors (foundations, norms, advocacy organizations, or others), which establish common norms, rules, objectives, and decision-making and implementation procedures for a set of policy problems."* (Andonova, 2010, p.26). PPPs could help to enhance the problem-solving capacities of a certain governance arrangement, as well as its legitimacy (Börzel & Risse, 2005). Moreover, states can lack critical knowledge and skill required to solve complex issues in (international) governance, which other actors could make up for (Börzel & Risse, 2005). In the context of climate change, PPPs have become a vital element in the (global) environmental arena (Pattberg, 2010), and thus are relevant to take into account in this research as well.

Accountability

Accountability is sometimes used interchangeably with "responsibility", and basically "*refers to the willingness to accept responsibility or to account for one's actions*" (Biermann & Gupta, 2011, p.1857). Here it is considered to be among the most important criteria to players and organisations, as it influences the input legitimacy of the process and the actors involved (Hahn & Weidtmann, 2016). Accountability means that (some) actors have the authority to hold other actors accountable to certain principles and to assess if those actors have followed these principles. If not, sanctions can be imposed on these actors (Bäckstrand, 2008; Biermann & Gupta, 2011). Accountability is often expected, either implicitly or explicitly, and failure to provide acceptable accounts often leads to some degree of critique (Tetlock, 1992). When this happens in the public sphere, this sometimes leads to significant scandals which might compel the people ultimately responsible to resign. In the case of the Dutch climate policy, accountability means that the policymakers (both public and private) are accountable within their own organisations, as well as to the Dutch citizens, as they will ultimately be affected by the policy (Mees & Driessen, 2011).

Accountability is a complex concept with many different approaches and definitions. According to Bäckstrand (2008), one way to dissect accountability is through hierarchical and non-hierarchical accountability. Hierarchical accountability means that workers can be held accountable by their superiors (Keohane, 2003), or the other way around. In terms of electoral accountability, this means that citizens can hold their elected politicians accountable (Bäckstrand, 2008). Non-hierarchical accountability – which is more relevant here, as the focus is on the Netherlands as a whole – is based on the involvement of private actors next to the public actors, in the decision-making process and implementation (Bäckstrand, 2008). Here, the accountability mechanism is more horizontal in nature, meaning that public officials and departments also need to report to other public officials and departments within the state (Ackerman, 2004). In the case of Dutch climate policy, both are relevant. Besides this split of accountability, there are multiple indicators to accountability. The first is *participatory accountability*, regarding the balanced representation of actors (Bäckstrand, 2008). This part is already covered in the previous criterion. The second is *transparency* (Bäckstrand, 2008); if there is no transparency, the policymakers cannot be held accountable properly, because the relevant information on the content and process is not available to anyone from the outside (Mees & Driessen, 2011). In long-term policy transparency is especially relevant, as it is important to show whether targets are (going to be) met (Nemet et al., 2017).

Past performance

The third dimension can be linked to the "E" from the JEP-triangle, namely the *economic-managerial approach*. This approach is mainly focused on the execution of public tasks (Arts & Goverde, 2006; Nelissen, 2002) – so in this dimension the focus is on the various levels of *government*, not the country as a whole – and whether this is done effectively and efficiently or not. The economic-managerial approach links to past public performance, as the JEP-approach also looks at (past) performance as an *ex ante* means to determine possible future public action (Arts & Goverde, 2006). The following criteria are included in this approach: effectiveness and efficiency, implementation capacity, necessity, and maintainability (Arts & Goverde, 2006; Nelissen, 2002). "Path dependence" is a concept that is also relevant, even though it is not related to the JEP-triangle. Its relevance is explained later in this section.

"Past" performance sounds quite broad; in this report, climate policy of the past 20 years will be taken into account. As stated in the introduction, the past performance is about the past commitment to and engagement in (inter)national climate policy. Therefore, the national climate policy relating to UNFCCC summits will be taken into account, but also climate policy that is not directly related to the UNFCCC.

Within the dimension of past performance, the most important criteria are considered to be *effectiveness and efficiency,* and *path dependence*.

Past effectiveness and efficiency
Past effectiveness and efficiency is an important criterion, as this criterion helps to see what the past engagement in terms of climate policy and its implementation have actually achieved. According to Kumar & Gulati (2009), "*Efficiency and effectiveness are the central terms used in assessing and measuring the performance of organizations*" (p.55). Effectiveness is often used in concurrence with efficiency, which is also the reason they are used together in this report. So what do both concepts mean and how do they relate?

Effectiveness can shortly and simply be described as "*doing the right things*" (Drucker, 1977, in Kumar & Gulati, 2009, p.55). An organisation or individual is considered effective when it achieves its (formal) objectives (Andrews & Entwistle, 2010; Kumar & Gulati, 2009). *Efficiency* can be described as "*doing things right*" (Drucker, 1977, in Kumar & Gulati, 2009, p.55). Some scholars only focus on financial cost of achieving a (desired) outcome (Andrews & Entwistle, 2010), while others focus, more generally, on "inputs" (Kumar & Gulati, 2009), which could also involve how much time is spent to achieve a certain outcome for example. As effectiveness and efficiency are separate phenomena, an organisation can be effective while it is not efficient, or the other way around (Kumar & Gulati, 2009). In the context of the Dutch engagement in and commitment to international climate policy, the effectiveness deals with the Dutch climate policy, both related and unrelated to UNFCCC targets; were the targets reached? The efficiency, relating to inputs, will deal with things such as the amount of time needed to develop and implement new national policy, and the amount of resources spent during these processes.

Path dependence
Path dependence is an important criterion, as it shows how flexible a government is. A government that is path dependent will not easily make big policy changes, even when there has been a clear paradigm shift or technological development. In the case of climate change, paradigm shifts and technological development are especially relevant. Paradigm shifts – when new consensus is reached on certain drivers of climate change for example – could bring new insights regarding certain policies, which might need to be changed in turn. Technological development could improve certain mitigating climate change efforts. When a certain string of governments has been path dependent, this is an indication that the political situation has been quite stable in that respect, which could mean that no big, radical changes should be expected in the future.

The first explicit concept definition of path dependence came from economics (Ebbinghaus, 2005) and highlights that a path dependent process enters into existence through initial random circumstances (Cairns, 2014), the critical junctures mentioned earlier. In the economics definition, these circumstances favour a certain *technology*, which is followed by processes of self-reinforcement and contingency (Cairns, 2014), leading to a lock-in, which can only be broken when an exogenous shock occurs (Moncada et al., 2017). When this lock-in occurs, the costs of leaving it are simply too high for it to be a reasonable option (van Buuren et al., 2016). One of the best known examples of this is the "QWERTY" keyboard layout, which was originally designed to deal with technical problems, not optimal typing speed. As it became the standard, so many people had learnt to use it which meant other, more optimal keyboards did not stand a chance (Ebbinghaus, 2005). This type of path dependence is a *technological* path dependence, and could for example happen within energy policy. Another approach to path dependence is *policy* path dependence – the political side to path dependence – where institutional patterns are path dependent (Bernasconi, 2014). The idea remains

the same: the assumption is that "*policies, once established, can be difficult to change or reform*." (Kay, 2006, p.31). Then, when change is necessary, certain elements are added to the current system, instead of truly reforming the system (Kay, 2006).

Box 3: The three dimensions of credibility with its criteria and indicators.

Rules and procedures	*Rule of law* Law and order
	Fairness Precautionary principle Polluter pays principle
Players and organisations	*Participation* Creating en implementing climate policy Presence of PPPs
	Accountability Participatory accountability Transparency
Past performance	*Past effectiveness and efficiency* Achieving objectives Inputs
	Path dependence Technological path dependence Policy path dependence

3. Methodology

After introducing the research questions and the theoretical framework above, it is also important to explain how all this was researched. The type of research was an *ex ante* case study of the Netherlands. The research was *ex ante*, as most of the actual implementation and monitoring of the Paris-related policies still needs to happen – which is why I took credibility as a central concept. In this chapter, first I shortly introduce the study area – the Netherlands – in terms of its political system, and why this country was chosen as a case study. Second, I elaborate on the data collection process and do so for each of the dimensions. Third, I describe how the collected data was analysed.

3.1. Case study selection

In this research, a case study was chosen as the research design, as it can provide a holistic picture of a certain case and phenomenon, much more detailed than when studying a large sample of countries (Kumar, 2014). The fact that the focus of this research is on exploring and understanding instead of quantifying also makes a case study a logical choice (Kumar, 2014). The Netherlands is a suitable case for various reasons: 1) the Netherlands is an EU, OECD country, so it was interesting to see if they can be expected to be one of the frontrunners within the EU and in general; 2) the Dutch have recently formed a new government with four, quite different, parties, which means it might be a challenge to reach consensus on complex issues such as climate change mitigation policy; 3) as already stated in the introduction, the in-depth study of this case could also provide some insights for other, similar countries; and 4) of all countries, this is the country that could provide most information, as I am Dutch and thus did not need to get across language barriers.

Study Area

The Netherlands is a low-lying country in Western Europe and over 25 percent of its territory lies below sea level (BBC, 2017), making it susceptible to further sea level rise. The country is a constitutional monarchy, although the king and queen have little political power. The king and the sixteen ministers make up the Government of the Netherlands, with the day-to-day management of the government being the responsibility of the ministers (Government of the Netherlands, 2017). The Cabinet, then, consists of all government ministers and state secretaries, its job being to take the decisions on the government's policy, as well as making sure that the policy is coherent overall (Government of the Netherlands, 2017). As the Dutch Parliament comprises many parties, often there is no single party large enough to form a cabinet on its own, which is why there is always a need for a coalition in order to reach a majority in the Senate (Eerste Kamer) and the House of Representatives (Tweede Kamer). The Senate houses 75 seats and gets appointed by Provincial delegates, chosen by the residents of each Province, while the House of Representatives houses 150 seats, elected directly through a popular vote. The current, newly formed coalition, has a majority – though only just – in both the Senate (38 seats) and the House of Representatives (76 seats). The coalition consists of two liberal parties (VVD, People's Party for Freedom and Democracy, the biggest party; and D66, Democrats 66), and two Christian parties (CDA, Christian Democratic Appeal; and the CU, the Christian Union). The previous coalition was formed by the VVD and the Labour party (Partij van de Arbeid), so the coalition's political colour and number of parties involved can differ substantially.

The Dutch political system houses three "powers", also called the *Trias Politica*. The first is the *legislature*, which is controlled by the Government, together with the Parliament. Both the Government and the House of Representatives have the right to propose a bill, while the Senate votes on bills that have come through the House of Representatives; they cannot introduce bills of their own. The second power is *executive*, which is the responsibility of civil servants on multiple levels: the

national, provincial, and municipal level, as well as water boards and certain independent governing bodies. The third power is the *judiciary*, which monitors law compliance and decides on punishment for those who violate the laws. The third power consists of courts, courts of justice, and the Supreme Court of the Netherlands. All three powers are separated and operate independently from each other.

3.2. Data collection

The data that was analysed in this report consists of both secondary and primary data. The secondary data consists of policy documents by the Dutch government, as well as documents from NGOs, including environmental groups, civil society, and business actors. Certain newspaper articles were also included, addressing climate policy. The primary data consists of interviews with multiple different organisations, which were selected based on the partners of the 2013 Energy Agreement and by asking interviewees which organisations they considered relevant to include. The Energy Agreement served as a base to select organisations, as there were many different types of organisations listed as partner – ranging from governmental organisations, every one of them having some interest in energy and climate. Many more than the twelve organisations were contacted (including the Association of Dutch Municipalities (VNG), Greenpeace, the ING bank, and the Dutch Association for Sustainable Energy (NVDE)), but not all organisations were willing to do an interview. The questions asked in these interviews are included in Appendix B (in Dutch, as all interviews were in Dutch). Important to note is that, depending on the interviewee and his or her position, expertise, and experience, not all dimensions were relevant to ask questions about. In the end, twelve interviews were conducted in total in December 2017 and January 2018 with the following organisations, listed here in chronological order: the local faction of the Greens political party (GroenLinks) in Wageningen, the Dutch Environment Agency (PBL), the Dutch Agricultural and Horticultural Organization (LTO Noord), Klimaatverbond Nederland, business organisation VNO-NCW and MKB-Nederland, the Energy research Centre of the Netherlands (ECN), the Interprovincial Consultation (IPO), Urgenda, the Dutch Association for the Chemical Industry (VNCI), a professor at Wageningen University and Research and Technical University Delft, the climate bureau HIER, and the Nature and Environment Federation in Gelderland (GNMF). A list of the interviewed organisations can be found in Appendix A, and what type of organisation each organisation is.

Rules and procedures

Relevant questions asked in this dimension are: What is the current climate policy? How is it being enforced and by whom? Thus, do all stakeholders adhere to the rule of law? To what extent are the precautionary and polluter pays principles applied, both on paper and in practice? This dimension and its related sub-research question "*How is the implementation of the EU's NDC target supported by Dutch rules and procedures?*" involved secondary data and primary data. Governmental sources were the Rijksoverheid (national government), the Ministry of Infrastructure and Environment (Ministerie van Infrastructuur en Milieu), and the Ministry of Economic Affairs and Climate (Ministerie van Economische Zaken en Klimaat). Other, non-governmental sources included news articles on climate policy, research by independent agencies such as the Dutch Environment Agency, and publications by environmental groups. Additionally, this dimension also involved the collection of primary data, namely interviews. Thus, the analysis in this dimension was based on primary and secondary data. All interviews (including those in the other dimensions) were semi-structured, as through this method certain important questions got posed to every interviewee, while there was also room for extra input.

Players and organisations

Relevant questions asked in this dimension are: Who are the relevant actors involved in the creation and implementation of climate policy? What is the role of each actor? What is their opinion on climate policy? What PPPs exist and how do they work? This dimension and its related sub-research question *"How is the implementation of the EU's NDC target supported by the players and organisations, both individually and collectively?"* involved both primary and secondary data, as documents formed the context, based on which interviews were conducted.

A relevant actor, or *stakeholder*, can be defined as an individual, group, or organisation who has an interest in a certain organisation, project, or policy field, as well as the power to passively or actively influence its aims or actions (Brugha & Varvasovszky, 2000; Varvasovszky & Brugha, 2000). The first step to identify stakeholders was based on secondary sources, e.g. policy documents and literature. This turned out to be partially the same documents as studied in the first and third dimension, as these documents also mentioned stakeholders involved in various processes. It is possible that important stakeholders did not surface at the beginning, which is why the first interviewees were also be asked who they considered to be relevant to be interviewed. The first interviews were used to extend the stakeholder network by finding potential new relevant stakeholders, which is called the "snowball technique" (Varvasovszky & Brugha, 2000). The main topics in the interviews were how the stakeholders were involved in the process of creating climate policy, as well as how they (were planning to) implement climate policies within their own organisation. The stakeholder interviews mostly took place at the national level, as this research is about the credibility of the national Dutch pledge, but also included stakeholders active and involved at the local/regional level (as the final implementation often happens at the local level). Thus, some regional and local organisations were also included.

Past performance

Relevant questions asked within this dimension are: Which UNFCCC-related climate policy has been signed by the Dutch government? How has this climate policy been adopted and adapted? Have the goals of these UNFCCC-related climate policies been met at the national level? What other climate policies have been implemented by the various Dutch governments? To what extent have Dutch climate policy and the use of technologies been path dependent? This dimension and its related sub-research question *"How has the past performance of the Dutch government been in (inter)national climate policy and what does this indicate for the future?"* involved both primary and secondary data. The interviewees were asked about Dutch climate policies from the past few decades and whether those policies had been effective and efficient. Data collection on the past performance of the Dutch government also involved researching policy documents on Dutch climate policy in the past, as these documents showed the progress of the various Dutch governments over the past 20 years. These policy documents were mainly governmental documents on law and policy and included documents from various ministries, some of which did not exist anymore at the time of the research, due to changes in the ministry structure over the years. It also included NGO documents, as these contained different insights and additional information. Newspaper articles were also relevant, as some newspapers reported on the adoption, implementation, or path dependence of certain climate policies and technologies.

3.3. Data analysis

Documents

The analysis of the documents mentioned in the previous sections partly mostly happened simultaneously with its collection; when collected/found, the documents were also be read and analysed, except when documents were found that might be relevant for a later part of the analysis. Some documents found were not read initially, as their relevance was questionable. When interviewees mentioned something about these documents, they would be read and analysed after all. Besides gaining information from the documents, they also served to generate interview questions on issues previously not thought of. The analytical framework served as a help to look for the relevant criteria and indicators in the documents, and see how they were approached by the various actors by whom the documents were written.

Interviews

The interviews were analysed following Kumar (2014), by first identifying the main themes, by reading all transcripts carefully, again noting themes that many interviewees addressed. During this process, certain relevant words, phrases, or sections were labelled. These were considered relevant when they were mentioned often, they were surprising or strong, the interviewee stated it is relevant, it linked back to theory, etc. These relevant codes could to some extent be classified under the main themes, identified earlier, keeping the codes that were perceived to be the most important. The second round of coding concerned the analytical framework; in this round, the concepts from section 2.2. were the main focus. The third round entailed the linking of findings from rounds one and two when possible, for example discovering a new indicator that fit one of the concepts. After this round of coding was complete, it could be linked back to the main questions that are relevant in each dimension. Finally, the identified main themes and codes from the interviews, in combination with the document analysis, were used to answer the question of the Dutch credibility regarding the implementation of the Paris Agreement.

4. Results

In this chapter, all dimensions and their criteria and indicators are taken into account to analyse the national Dutch climate policy. In addressing the themes, each time I discussed the interviewees' response and argumentation in five groups, in the following order: the governmental interviewees, the business and industry sector interviewees, the civil society interviewees, the ENGO interviewees, and the experts (to see which organisation was placed in which group, see Appendix A). Naturally, this only applied when a certain theme was addressed by interviewees from all of these groups, otherwise groups were left out of the discussion.

4.1. Rules and procedures

"Rules and policies need to facilitate progress" and "Innovation"

An important theme that was discussed by multiple interviewees was how governmental rules and regulations were supportive or hindering innovation practices in renewable energy, or other progressive climate policy. The national government has the power to change or introduce new laws, but the examples given by various interviewees showed that the government apparently did not act fast enough to facilitate new developments sufficiently. Lower governments did not have the legal power to implement progressive legislative changes by themselves.

The local government interviewee gave the example of the requirement to connect new housing to the natural gas network. The municipality of Wageningen wanted to build new housing without natural gas network connections, but back then this was still required by law and in this case it slowed down the sustainable development of the housing market. Since January 1st, 2018, it is not required anymore by law and since that date to the municipalities have been able to decide in what way they want to supply new housing with energy (Rijksoverheid, 2017b). He said that "there are many things you cannot impose, so when there are people, or a project developer that wants to build something somewhere, then you may have the ambition as a municipality that it needs to be climate neutral, all energy needs to come from the roof and there will not be a natural gas connection, but as long as that is not arranged legally, you do not really have a stick to say that it needs to."

The agricultural industry interviewee addressed an example regarding the difficulties for local energy circulation structures, and the fact that the current rules did not facilitate small-scale energy production by farmers, as especially electricity network operators had very little room within the law to experiment with new energy structures. He said that "the network operator is completely anchored in legislation, up to the price per meter for a section of cable they need to install". Sometimes, one would be able to get some space through a pilot project, which provided some room to experiment while being monitored. In those instances, the various parties involved considered how to best stretch the law to facilitate progress, but he added that "that does not mean that it is also common practice right away." He also discussed the issue that many licenses were hard to get, for example for an individual wind turbine, and quite costly as well, meaning most farmers were not able to do it.

One of the civil society interviewees addressed an issue surrounding waste. The law did not facilitate a move towards a circular economy, as when something was labelled as "waste", one was not allowed to re-use it in other products for example. She said that "the fact that we are now moving towards a circular economy which has to run on 100% sustainable energy means that certain legislation that was once conceived forasmuch something completely different is now getting in the way."

Another important theme that was discussed by multiple interviewees was how the government should facilitate and stimulate innovation. This theme, "Innovation", could be paired with "Rules and policies need to facilitate progress" in this cluster, as according to most interviewees, the government was the actor who needed to make innovation possible. Thus this theme was also focused on facilitation through government legislation and incentives, which could support or hinder the innovation process.

The regional government interviewee stated that the current policy regarding the top sector policy and SDE+ (Stimulation of Sustainable Energy Production) should be aimed more at transition than economic growth, as the SDE+ was very much focused on unfolding renewable energy only. She noted that "what we also find important is that with the financing of new techniques you give more room to smart combinations, area-oriented financing, that sort of thing, because through that you can make combinations you do not have otherwise." She argued this was not sufficiently present in schemes such as SDE+, as it was mostly aimed at unfolding cost-effective measures; combining different measures was very complicated, as one would fall into different categories/policies. She added that "provinces often work on regional programmes, well where multiple measures come together, so more efficient, only when you cut them all apart it proves more expensive". She argued that this could be stimulated more by the national government.

The agricultural industry interviewee noted that there needed to be a symbiosis between the government and the business sector, where the government provided the stimulation and facilitation for the business sector to move forward and he believed that big companies such as Shell and the Gas Union should lead the way in the transition. The chemical industry interviewee added that he thought that the government needed to share some of the risk when developing new technologies. He also noted that some parts of the industry sector was not getting enough attention regarding innovation: the production materials side of the spectrum, of which the Netherlands exports 80% to other countries for example.

One of the civil society interviewees argued that the central government was four or five years behind on reality. He noted that "the central government is a tank; very much from vested interests, and from the past it tries to change itself, but it also has a great many interests not to evolve and so change very often comes from the other parties." Additionally, he argued that many actors taking part in the top sector policy benefitted from investing in current technologies instead of innovating technologies for the future. Because of this, no large transitions were being made, and he said the innovation market was really a niche market. The other civil society interviewee noted that in some policy sectors, there had been too much of a "technology push" by the central government. She argued that instead, the government needed to focus on *what* needed to be realised, and leave the *how* to the market to solve. Still, to accomplish certain innovation, she noted that the government could help companies by taking on some of the risk, or paying for the financial gap companies were dealing with when investing in new technologies.

The regional ENGO interviewee agreed with the point made by other interviewees, that innovation needed to come from business sector, at least when talking about technical things. According to the national ENGO interviewee, the government could steer the market in a certain direction by banning certain products, and stimulate the market in that way to come up with good alternatives. In this sense it would go beyond simply setting targets and let the business sector figure out how to get there; it would provide an extra impulse. At the same time, he also noted that it would be unwise to impose certain things, for example by saying to an energy company: 'you need to cut back on natural gas by

2% every year', as the companies in question did not have that direct influence on its customers in order to achieve that target.

According to two of the experts, the companies needed to keep track of where the possibilities are and come with ideas, so bottom-up, while the government facilitated the large-scale application of these ideas through top-down regulations. This could be law or subsidies, and was meant to be an interplay between the government and the market, so a public-private partnership. Similar to the point made by one of the civil society interviewees about the technology push, one of the experts said that it did not work if a government decides for itself in what technology it wants to invest. The ideas are needed bottom-up, and top-down legislation was needed that enables those ideas to be implemented on a somewhat larger scale.

Concluding, these two themes "Rules and policies need to facilitate progress" and "Innovation" related to the first dimension and to rule of law specifically, as government policy and financial instruments are among the most important driving forces behind the implementation of sustainable practices (Chang et al., 2016). What became clear through the interviews was that governmental policy was often behind on the change "wanting" to happen, while the central government was the party in charge of facilitating and stimulating those changes through its policies. So, one could say that the government did not use its power to change or introduce new policy or law sufficiently. It also became clear during the second round of coding that the little hard law that *was* in place to stimulate the transition, the Environmental Management Act (Wet Milieubeheer, where certain parties were obligated to take energy saving measures they would earn back within five years), was not being enforced at all during the time the interviews were held. However, in other instances, such as the energy network operators needing to stick to certain things, the government *did* enforce its laws, limiting the room for innovation in the process.

"Climate change as a socio-economic issue"

Many interviewees framed climate change as a socio-economic issue, next to it being an environmental issue. Here, the focus was mostly on the general population; how they would be influenced by certain new policy, but also how they were dealing with the mitigation policy that was already in place at the time. However, as companies are also part of society, this theme was also relevant to them, as some policy might be undesired for them, which is why they could choose to move to a different country. This theme was about who was paying and going to pay for what, and whether the distribution of burdens and benefits was (going to be) fair.

One of the policies that was often addressed by the interviewees was setting a minimum price for CO_2 emissions for the electricity sector in the short term, an aspiration that was discussed in the 2017 coalition agreement (VVD et al., 2017). The local government interviewee noted that when the central government would really introduce this policy instrument, they would need to make sure that the already poor people were not going to suffer financially because of this measure. As these people would not be able to renovate their houses to decrease their energy use, they would need to pay more CO_2 tax than people who *would* be able to invest in improving their house. The regional government interviewee noted that the tax discount for the large-scale energy consumers would not help to start using less energy. About 55% of the fossil energy use by companies in the chemical, steel, and fertilizer sectors was not being taxed, because of their economic position in the international market (Vollebergh et al., 2017). So one could wonder if this had to be taken into account more, instead of increasing the costs for the ordinary citizens.

The agricultural industry interviewee mentioned the words "righteous sustainability", by which he meant that people in the area of large-scale, visible projects would not only experience the burdens of such projects in terms nuisance, but also be able to participate in the benefits, and he wondered how that could be achieved. He also noted that it was important to make sure that every citizen, including those with little money, would be able to make changes. The business sector interviewee noted that the energy-intensive industry was spared 7.2 billion euro each year and referred to a report by PBL (the Dutch Environment Agency). This report from 2017 stated that "*about 16% of the total environmental damage that arises in the Netherlands, or about 7 billion euro, arises during the production of materials and semi-finished products. This damage is currently virtually not priced*." (Vollebergh et al., 2017, p.14). The report also argued that the damage caused by using polluting materials, for example using fossil fuels as the raw material during the production of plastics, was not being taxed, at all (Vollebergh et al., 2017). The chemical industry interviewee noted that the two most important ways the industry was charged for its emissions were through ETS and the energy tax. He indicated that one could question whether those payments were in relation to the damage caused at the end of the line, but he also argued that the consumer did not pay *at all* for those products when they purchased them in the shop.

One civil society interviewee agreed with the point made by the local government interviewee about the CO_2 tax: if such a tax were to be introduced, the people with lower incomes would have to pay much more. Accordingly, these people would need to be compensated in some way, as otherwise a divide between rich and poor would arise. He also added that at the moment of the interview, only the richer people were getting their money's worth when improving their house energy label, so in that sense the divide was already there to some extent. Another component to this divide, although in a different way, was that he noted that companies could make large investments, knowing that when these investments turned out not to profitable they would be compensated by the government anyway, and thus by the citizens; "when you build a large coal-fired power station and you know that it will need to close in five years' time, that the investor then says: 'we build it anyway, because we will let the government pay the bill' [...] and if we find out in five years' time that we do not want it, then the bill simply ends up with the citizen in the end.." It added to the argument made by the regional government interviewee in the sense that the companies were not required to pay for many things. The other civil society interviewee addressed the fact that not everyone had the same resources available to lobby and influence climate policy, so their socio-economic interests might not be served properly by the governmental policy.

The national ENGO interviewee observed that the subsidies for the built environment were mainly used by the people who already intended to improve the energy efficiency of their house, and these people were the already richer people, as some private investments were also needed to be eligible for the subsidy. He explained that the fairness of the policy was an issue, as the policy facilitated a transfer of money from the poor people to the richer people through the subsidies everyone was paying for: "Poor people who do not have money to buy solar panels subsidise the rich people, and that concerns substantial amounts of money, and there is a sort of blind spot regarding that within climate policy." He also noted that one should be careful not to push people to alternatives that did not work properly; he gave the example of installing a water pump in a house that was not properly insulated, so people would have to spend a lot of money without getting the (full) benefit of the product. He stated that these kind of measures, as well as measures that touch upon individual freedom, would result in opposition from society and required extra attention.

One expert noted that the costs per ton emitted CO_2 were much higher for the citizens than for companies. He added that "that has a reason, naturally if you *did* make the companies pay, then you encounter all sort of trouble surrounding the level playing field". When companies would become too severely taxed, they would continue their business elsewhere, as they would no longer have a good business case within the Netherlands. He argued that therefore, the polluter pays principle was very difficult to maintain, especially as many companies were operating in the global market.

Concluding, the implementation of a CO_2 tax could create unfairness, as this could possibly mean an unreasonable distribution of the costs and benefits among and between generations. This could be related to the precautionary principle in some sense, not in the environmental sense, but in the socio-economic sense; when the CO_2 tax would be introduced without being sure of what negative effects it might have on the poorer part of the population, it should not happen according to the precautionary principle. However, without the CO_2 tax the policy could be considered to be unfair as well, through the example that citizens were paying much more tax per ton CO_2 than the companies were, linking back to the polluter pays principle, one of the indicators of fairness. The CO_2 tax can also be linked to the environmental aspect of the precautionary principle, as introducing the CO_2 tax on the national level only could mean that companies affected by this would simply move to a different country, leading to an increase of pollution in that country, as well as more pollution through transportation. It is hard to predict what the environmental effects would be of implementing such a policy only within the Netherlands. If companies indeed moved to a different country that uses more polluting energy sources, the environmental effects of implementing the CO_2 tax could in fact be negative, and therefore one could argue the precautionary principle should really be taken into account when making a decision about such a policy.

"Sectors lacking policy"

Some interviewees addressed the fact that there was little policy regarding the aviation and shipping sectors. This, while the shipping sector is among the most polluting sectors in terms of NO_x and particulate matter emissions within the Netherlands (CBS, 2016), and the international aviation sector in terms of CO_2 emissions on the global scale: about 4.9% (De Volkskrant, 2017). The shipping and aviation sectors were not included in the Paris Agreement, as it was hard to determine which country was responsible for the emissions in these sectors (NOS, 2017); the country of departure or arrival? The country of origin of the goods or passengers? The 2017 coalition agreement stated that the Netherlands aimed to introduce a tax on aviation on the European level (VVD et al., 2017). For a short period (from July 1st 2008- July 1st 2009), there was a previous Dutch tax on flight tickets (Ministerie van Infrastructuur en Milieu, 2010). The reason for its short existence was due to three things: 1) many people dodged the tax by departing from other airports, in Belgium, Germany, and France; 2) it contributed 20% less than was expected financially; and 3) there were no significant environmental effects (Het Parool, 2017). The difference with the 2008 situation was that in the 2017 coalition agreement, the Dutch coalition stated it wanted to introduce a tax on the European level, while the 2008 tax was on the national level. Another sector that was not really addressed in the current policy, as well as in the proposed policy, was forestry (the word "forest" was not mentioned once in the whole coalition agreement). It was also barely addressed by the interviewees, only by the national and regional ENGO interviewees.

The national ENGO interviewee stated that the policy regarding shipping "is only some tinkering at the edges" and that there was no policy regarding the aviation sector at all, and argued that the mobility sector as a whole was simply lagging behind. He doubted whether introducing taxes on flight tickets would work, as "experience shows that people will simply pay it, because it works like that when you

put substantial taxes on that, then the government gets its taxes and they can decrease other taxes, for example the income tax, so your wage will increase, and then you will be able to pay it. [...] Many people simply want to see the world and they enjoy that and you're really not going to prevent that by charging 100 euro extra on a flight ticket, then they simply save up money for one more week." The regional ENGO interviewee considered it strange that the discussion about Lelystad airport was still ongoing without getting a lot of attention and wondered why the discussion was not aimed more at the efficiency of the current flight network. Many flights to and from Amsterdam were "hubs", so it could be very well possible that, to do it more efficiently, Amsterdam would cease to be the large airport it was at the moment.

One expert argued that the existing norms on the aviation and shipping sectors would not suffice by far to reduce emissions sufficiently. Another expert noted the use of bunker oil in the shipping sector, "bunker oil" often being used as the umbrella term for fuels used in the shipping sector (VNPI, 2017). Bunker oil, or heavy fuel oil (HFO), is "*the world's dirtiest diesel fuel – a toxic, tar-like sludge that usually contains 3.500 times more sulphur than the diesel used for cars.*" (The Guardian, 2017). As noted earlier, the shipping sector was not included in the Paris Agreement, which made it a hard-to-tackle issue, as the urgency for policy needed to come from somewhere else instead. The 2017 coalition agreement noted that "*a great deal of environmental gain can still be achieved in shipping and inland shipping.*" (VVD et al., 2017). It further stated the desire to draw up a Green Deal (an initiative by the central government to give more room to innovative, sustainable initiatives) together with the sector, in order to make the shipping and inland shipping sectors, and the harbours more sustainable (VVD et al., 2017), but no specific targets or further policies were mentioned.

As noted before, the two ENGO interviewees were the only interviewees to mention the forestry sector in relation to climate change mitigation. They both mentioned planting more forests as a good option, for example as an alternative to, or in combination with, carbon capture and storage (CCS). The little interest and attention from other interviewees might have been because in the Netherlands, the emphasis had come to be on using biomass as a fuel, rather than a way to store CO_2. As the interviewee from the regional ENGO stated: "When it becomes cheaper to burn it than to use as lumber, something is obviously wrong." According to him, it was all because of the subsidies. It could be considered striking that the new coalition spent so little attention on the subject, as within the EU, emissions from land use, land use change, and forestry (LULUCF) were high on the agenda as part of the strategy to implement the EU's 2030 climate objectives (EC, 2017). By the end of 2017, a provisional agreement was reached, which included "*a basic commitment for each Member State to comply with the 'no-debit' rule by ensuring that for each 5-year compliance period (2021-25, 2026-30), the amount of carbon absorbed in the LULUCF sector is at least equivalent to that emitted, in accordance with the accounting rules*". Naturally, the LULUCF sector encompasses more than only the forestry sector, but as a whole, in the Netherlands the emissions from the sector rose from 6.1 Tg CO_2eq to 6.4 Tg CO_2eq between 1990 and 2014 (RIVM, 2016). Although these numbers always come with a certain degree of uncertainty (RIVM, 2016), no significant decrease of emissions could be shown in any case.

Concluding, in the case of the shipping and aviation sectors, according to the interviewees who addressed it, the rule of law was more or less lacking entirely, and one was left to wonder whether this was fair. However, even though there was not much national policy yet, there *were* global and EU agreements and targets for the shipping sector, regarding energy efficiency and the reduction of the use of nitrous oxides and sulphur (Rijksoverheid, 2018). Regarding the desire for a tax on flight tickets, making people pay more for their tickets would not work according to the national ENGO interviewee. Thus, following his argument, even if the polluter *was* made to pay, it still would not have a significant

impact on climate change mitigation efforts. Moreover, introducing a tax on flight tickets also links back to the previous theme, where the richer people would be able to pay this tax, while the poorer people might not be able to afford it anymore, again leading to a divide. Regarding the forestry sector, the lack of emission reduction, and considering the EU agreement and the opportunities noted by the ENGO interviewees, the forestry sector and the LULUCF sector in general required more attention than it got in the 2017 coalition agreement.

"Changing things at the national level"

Making (large) alterations in climate policy and legislation on the national level was considered to be an important issue by multiple interviewees. Within the system of EU or even global cooperation in certain policy areas, including climate change, sometimes it might not be sensible to introduce policy changes at the national level, as it could undermine a country's economic position. In this sense, this theme linked back to the flight ticket tax discussed in the previous theme; when it was introduced nationally, it did not work, as people could simply depart from a different country. The same applies for polluting factories; if they need to pay more taxes in one country, they can move to another country that does not impose these taxes. However, at the same time the country – or a small coalition of countries – could also set an example for other countries, leading to a wider adoption of a certain policy in due time. In that case it could in fact be (economically) interesting to be a frontrunner.

The point made by the business sector interviewee was that one could not consider the Netherlands as a lone actor in policy and law making. He addressed the planned closing of the coal-fired power stations by 2030, something he completely disagreed with: "it is really bizarre, it is really.. I mean, besides that we are going to import more electricity, then it comes from lignite power stations in Germany [...] naturally that is indefensible economically". He stated that the Netherlands had the most efficient coal-fired power stations in the world, so if the Netherlands needed to import that energy, they would be worse off, both in the economic and environmental sense. According to him, the same thing applied to the introduction of the CO_2 tax, or other measures to make the polluter pay; if such a thing was implemented at the national level, companies would simply move to a different country without such tax structures, and the Netherlands would not be better off at all, economically and environmentally. As he put it: "Nederland armer, de wereld warmer" (the Netherlands would lose economic competitiveness, while globally, the warming continued unaltered because the GHG emissions would not decrease).

A counterargument was provided by a civil society interviewee, who said that the transition would happen anyway at some point, and that parties might as well invest in it at the beginning, and become a frontrunner instead of lagging behind at the rear, and he stated that the investment would pay off. That way, the country could adapt faster to the changing reality. Additionally, "then you say, *this* generation is going to pay these costs, and our children and grandchildren will not get those costs. [...] So it is correct that many municipalities will say, or the province or small and medium-sizes enterprises will be like who is going to pay for this? And that is tricky, because *we* need to pay now, but what we [at Klimaatverbond] say is: fact of life, your emissions will cost the next generations enormous amounts of money. And you'd better bear those costs *now* so you will adapt in time, instead of not bearing those costs and let the bill get out of hand". However, he also agreed with the earlier point made that big things would need to happen at the EU, or even at a global level, but maybe not nationally.

The regional ENGO interviewee put in the idea for an alternative CO_2 tax: according to him, if one such scheme was to be implemented, it would help if the tax levies actually stayed within the companies themselves, in a separate accounting scheme. They would have to use the money from the tax to invest

in sustainable measures, and such a scheme could also be implemented locally, or regionally. That way, companies would get a different business plan, and he argued it would be interesting to look at. Still, he also noted that it would help if such scheme were to be imposed by the central government, and that it would help even more if that was done by the EU.

Two experts agreed with the business sector interviewee; one should not consider the Netherlands as an island, and one of the experts gave the same example about the coal-fired power stations as the business sector interviewee: if the coal-fired power station were closed in the Netherlands, stations in other countries would need to become active again, and they were somewhat older. Thus they would pollute more than the Dutch stations, so this interviewee argued that closing down the Dutch stations was not a sensible idea when looking at climate change from a global perspective. He also added that the Netherlands was a relatively small party, and because of that it did not have the capacity to be one of the driving actors internationally.

Concluding, even though the national government has the power to change the rule of law, in some instances it might not be a sensible thing to implement changes nationally. And even if the national government enforced the law and order, it would not necessarily have a significant impact on the climate change issue, as many companies could simply move to a different country and continue their business as usual, similar to many citizens departing from different airports during the time of the national Dutch tax on flight tickets. In fact, as the example of the foreign coal-fired power stations showed, taking drastic measures at the national level could also lead to net negative effects regarding global climate change. However, setting a good example nationally could also move other countries to adopt a similar scheme; one of the experts noted that the Dutch SDE+ scheme was adopted by other countries. The same applied to investing in solar and wind energy technology; some countries needed to lead the way in that before other countries started to invest and adopt as well. Still, as multiple interviewees indicated, large-scale changes needed to come from the EU level, or maybe globally even, but changing or introducing things at those levels faced problems of its own, for example the amount of time it takes to deliberate and decide.

4.2. Players and organisations

"Business sector influence"

The influence of business sector actors was framed as a negative influence on governmental climate and energy policy by most interviewees who addressed it. Various interviewees expressed the concern that the business sector has (had) a big influence on the process; the organisations with many resources could really exert a certain influence. One could argue that the business sector, like all sectors, should have some influence on the governmental policy, through deliberative processes together with the central government. However, the question was whether this influence was not affecting the participation of other actors during the creation or implementation of central governmental policy.

One illustration to show that the business sector could be very influential was the fact that VNO-NCW and MKB Nederland, together within one organisation, represented almost 90% of the Dutch business sector, according to the interviewee from VNO-NCW, the business sector organisation. He said that "if we speak with one voice, and we represent 90% of the Dutch business sector, then we often are listened to." He also argued in favour of a widely supported new Climate and Energy Agreement, as other parties would also be needed to limit climate change. However, "if you want to save tons of CO_2 emissions, those need to come from the business sector, that is where it's emitted. [...] when you know

for example about the industry, which also represents approximately a quarter of the 200 megaton we emit yearly in the Netherlands, then you have twelve companies that emit 75% of that. [...] *they* are responsible for the CO_2 reduction, if *they* don't commit, you are not going to reach the targets the cabinet set for us and itself either." So, he thought it was logical that the business sector would close deals with the ministry of Economic Affairs and Climate for example, to see how the sector could reach a certain desired CO_2 reduction. He considered it important that NGOs were keeping an eye on the process, but in the end they would not be able to achieve CO_2 reduction by themselves.

A civil society interviewee showed that closing deals with the government was also undermining the scientific grounds of certain agreements. The example he gave was that stakeholders with deep pockets could more easily take part in Dutch standardisation institute (NEN) commissions than other organisations. All parties taking part in a certain standardization project need to pay an equal share to NEN to finance the development of the standard (NEN, 2018). This means that parties with many financial resources are able to influence the process of standardisation more than others. Because of this, he claimed, the standards and agreements were becoming political instead of scientific, leading to wrong standards and assumptions. He said that one such non-scientific "agreement is that burning wood or organic waste and that kind of materials is part of the short CO_2 cycle, and thus not contributing to the climate problem. Whether it is actually true or not does not matter, because that is the agreement. And that agreement is made by the interests groups." ENGOs and energy cooperatives did not have the means to buy into these commissions. Consequently, he said, when a city was saying they were contributing a lot to climate neutrality in neighbourhoods, it was based on agreements with no scientific basis. The other civil society interviewee noted that individual entrepreneurs were unable to lobby for their cause, as they did not have time to go to The Hague. Instead, the lobbying was mainly done by the large umbrella organisations, and bobos who themselves were not dealing with the issues on the ground level, thus not representing the small business owners.

One expert said that certain political parties – VVD, CDA, and PvdA – had been serving the interests of the industry regarding CO_2 policy too much. "What I have encountered is that the Netherlands is a sort of OPEC (Organization of the Petroleum Exporting Countries) nation and that the economic powers and the business sector powers are very strong in stopping progressive CO_2 policy, so Shell, Tata Steel, the harbour of Rotterdam, and also the large banks have been hitting the brakes immensely hard regarding CO_2 policy until recently, the Dutch state as well, also because the tax, the income of finances, was very much linked to revenues from natural gas and they were also very proud of our big multinational Shell, and so yeah, the fossil industry was actually being helped more than that things were made difficult for it in the CO_2 policy." He even went so far as to say that "the business sector in the Netherlands has turned out to be more powerful than the democracy. [...] In essence we are an oil-addicted country, where it has become clear over the past 30 years that the political democracy is no match for the, well, financial-economic powers."

Concluding, even though most interviewees agreed that there was a wide diversity of participating actors and organisations, for example in the 2013 Energy Agreement, could one really speak of equal participation when some actors proved to be (much) more influential than others, especially the business sector actors? And had been for decades? Measuring "influence" during the creation of government policy is a hard thing to do, but what was clear was that the influence was there, for example through partnership governance, and corporations have become "*increasingly 'internal' to the state*" (Miller & Harkins, 2010), as was illustrated by one of the experts, saying Shell and Dutch politics had become heavily entwined. This also showed in the cabinet newly formed in 2017; three ministers had worked for Shell previously, including the minister of Economic Affairs and Climate. The

theme of business sector influence also linked to past effectiveness and efficiency, as according to the local government interviewee, the influential business actors had been slowing down the process, and the ambitiousness of policy and targets was also decreased by their influence.

"Policy room for regional and local governments"

Even though it was not addressed by many interviewees, the national and regional government interviewees framed the limited room for provinces and municipalities as a factor that decelerated progress in climate change mitigation. In the Netherlands, some responsibilities were decentralised to the regional or municipal governments, but within climate policy, this seemed not to have happened sufficiently. As the local and regional government interviewees indicated, sometimes it was hard for the lower governments to undertake progressive action by themselves; they simply did not have the legal power to do so and depended on national legislation or policy to facilitate them.

The local government interviewee gave the example of the municipality of Wageningen wanting to build housing that would not be connected to the natural gas network, but to an alternative. However, the city council did not have the legal power to force the project developer to do so, as until January 1st 2018, it was still required by national law to connect new housing to the natural gas network. The regional government interviewee explained how at IPO (Interprovincial Consultation) they would like to have more room for innovation and customisation of regional policy, as there was very little room for that, both financially within SDE+ and within the rules and regulations. Additionally, the provinces did not have the legal authority to obligate individual companies to undertake sustainability measures. The example given there was that the provinces could not oblige companies that did not fall under the Environmental Management Act to take sustainability measures, as those companies were exempted. Moreover, according to the regional government interviewee those were the companies where most progress could be made. Additionally, she noted that provinces did not have the power to enforce certain policy; she applauded the chemical industry's roadmap to become more sustainable, but added that it would help if the province was also able to monitor and enforce some more, as an extra means to keep everyone on track. The regional government interviewee also indicated that when a certain target was not achieved, sometimes provinces were held accountable for that, while legally the provinces were not responsible. "What we really notice is that people often look towards the provinces when the megawatt targets are not met, while when you read it properly, provinces are only responsible for facilitating it spatially." Subsequently, she argued for making it clear, explicitly, who was responsible for which aspects of the policy, in order to be able confront each other when something was not sufficiently progressing.

Concluding, the examples showed that the lower governments were having difficulties participating in the creation of a policy, as well as in the enforcement of policy. This is also where the accountability facet of this theme came into view, as the regional government interviewee explained that the provincial government was held accountable for something they legally were not responsible for. The 2017 coalition agreement stated that the cabinet was going to formulate goal-oriented, regional plans to achieve an optimal result regarding energy-saving, and sustainable heating and production, in cooperation with municipalities, provinces, water boards, and (energy) network managers (VVD et al., 2017). Through these plans, the input by the regional and local governments in both the creation and implementation of (central) government policy could be improved. This could prove vital in the transition process, as decentral governments could become discouraged when not properly involved in the central government's policy, and as the local government interviewee noted: the implementation happens at the local level. And as noted before in section 2.2., even the best policies need proper implementation in order to be successful.

"System changes" and "Change in thinking"

Multiple interviewees indicated that the government-governance system needed to be changed, in terms of top-down versus bottom-up policy structures, more towards the latter. This would also be in line with what the decentral governments stated jointly regarding the Climate Agreement: *"In order to reach the energy and climate targets for 2030 and 2050, cooperation is needed between governments and citizens, companies, and civil society organisations."* (IPO, 2018). So according to this, the central government should not only impose legislation and policy, but increase cooperation with other actors in order to achieve progress. This would mean participation of all mentioned actors, for example through public-private partnerships. Besides this system change, according to some interviewees system changes were also needed in the way the Dutch government approached energy and GHG emissions, in terms of taxes and other policy options.

The local government interviewee argued that the energy transition "should not be imposed from The Hague, it also won't work if we only do it here in the municipality. No, it is a system change, it all has to change. [...] And that turnaround needs to happen everywhere, everyone needs to participate, and if they only said in The Hague: 'you must do it like this', it won't happen." He also noted that in the end the actual policy implementation mostly happened on the local level, so again made the point that it would help if the central government could take away the restricting rules, to facilitate the local development and implementation of solar panels, wind turbines, etc. According to the regional government interviewee, better cooperation and organisation was needed between regions, different levels of government, and different sectors, as those should not be considered as separate islands. She also argued in favour of involving citizens more, by further developing participatory arrangements. Regarding the change in approaching energy and GHG emission policy, she argued in the context of top sector policy: "you should focus it much more on transitions, so 'what does the energy sector need to become more sustainable?' is different than 'how can the energy sector grow further?' That is simply a very different focus of your policy."

The chemical industry interviewee argued that the consumers were a difficult group in the equation. Regarding the system change in the climate policy, he said: "In the built environment, the discussion is about 'well, we need to entice the house owner to take energy saving measures, but not only the renovation of his house, he also needs to get a new kitchen, so he makes that choice'. Well hello, go and entice 5.000.000 households!" He added that it was difficult to make consumers take certain measures, as they would simply vote for a different political party the next time, making it hard, politically, to impose certain measures.

One of the civil society interviewees made a related point to the point made by the regional government interviewee: a strong local-regional climate policy was needed, a shift from national to a strong, regionally embedded structure, so the regional-local implementation could be improved. He stressed that "all inhabitants, from left to right, want to contribute, but on the condition that they are openly informed, that they can properly set their interests, and that they are co-owner of the process, and then they are all very willing." He added that his organisation was trying to get the recognition from organisations such as VNG, IPO, the ministry of Economic Affairs and Climate, and the ministry of Internal Affairs, that they considered participation with civil society, the well-organised citizen, to be important. "Well, buckle up, because they see that as a breach of their own hegemony, so you need to lobby hard just to achieve such a simple recognition." Regarding the important policy system changes, he stated that those were still too far on the horizon, for example setting the minimum CO_2 price. The other civil society interviewee argued that people needed to realise that strong teamwork between all actors was required, which also meant that everyone had to start doing things at the same

time, at once, instead of waiting on each other to deliver first. Regarding the change in policy approach she noted that "there has been a whole period where the emphasis really was on the economy and economic growth, and not at all on sustainable growth. Not all growth is good, and we need to really start realising that".

The regional ENGO interviewee agreed with one of the civil society interviewees that the government was struggling with taking on a different role in governance settings. He gave the Energy Agreement of Gelderland as an example where they actually *did* do that, and where civil society took the lead instead. The national ENGO interviewee argued that citizens especially needed to be included in issues where societal support was low, as in those instances, the challenge was how to get the wider society to take action.

One of the experts noted that the amount of jobs was increasing in the sustainable sector, while it was on the decrease in the conventional sector, which indicated a move in the right direction. Another expert added to this and stated that "until now, climate policy has always been regarded as making a contribution to the world, some sort of philanthropy of a sort of moral obligation, and now it has sort of turned into an employment obligation [...] so it has actually changed from a moral issue to a technical-economic issue, and from an environmental policy issue, it has turned into an issue of industry policy and employment policy." He also noted that extensive laws would not necessarily be needed to get the system to change; banning certain things, such as the use of CFKs, diesel cars, or coal-fired power plants could make a difference.

The theme "Change in thinking" related to this theme of "System change", as in order to really change a system and make headway, a change in thinking was required. By the various levels of government, but also in the business sector and wider society. One issue that surfaced was that many people did not regard climate change as an urgent matter, and underestimated how much progress was already made with the transition. This was shown by a Motivaction report that was addressed by multiple interviewees, which showed that in 2015, the average Dutch citizen thought that about half of the energy use originated from fossil sources, while in reality this was approximately 90% (Motivaction, 2016). A similar thing was found regarding the use of sustainable energy; while this was only 5.6%, people thought it was more than 33.33%. This could also have led people to believe that climate change and the energy transition were issues that were not that urgent, and only a small minority of Dutch people considered energy to be one of the top five issues where immediate change was needed. However, this Motivation research was conducted before it became widely known that the Netherlands was far behind on its targets (Motivaction, 2016), so perceptions could have changed significantly since that time. Still, as noted previously, multiple interviewees still considered citizen action, or rather the lack of it, to be one of the issues within the climate change problem during the time interviews were conducted.

The local government interviewee said that the change in thinking and attitude was not happening fast enough, but also indicated that climate change was becoming more important in the media. The regional government interviewee noted that fossil fuel companies had really started to look for alternatives. She also addressed the fact that the citizens were overestimating the progress made already in terms of the share of sustainable energy of total energy consumption. She stated that climate change was not considered to be a very urgent matter, especially relatively to other issues, so she thought the public awareness was not high enough. Because of that, her organisation lobbied at the ministries to launch a campaign to create public awareness about what climate change meant and why certain policy was necessary to mitigate it.

The agricultural industry interviewee mentioned that, because of the Paris Agreement, climate change had gained more attention. He also noted that only 10% citizens regarded climate change as an urgent matter and that the turning point in thinking and acting thus was not reached yet. He illustrated this with an example: "we as people are all part of a school of fish, we are a small fish, and if everyone moves in *that* direction, well, I will also move in that direction. And of course there are always a few fish that are going *this* way [in another direction]. [...] at first it was only one small fish, and now dozens, hundreds, thousands are going – not all at the same time – but every now and then they go left, and we as a school are still just going straight. But there comes a point, a turning point, that at some point the school of fish will notice 'there are so many going left, we are *all* going'. [...] there will be a sort of turning point at some point, but we have not reached that point yet." He also realised that it would never happen that *everyone* would change their way of thinking and acting after such a turning point, but at least it would become "mainstream". According to the business sector interviewee, a change in thinking still needed to happen in his sector to some extent; companies were yet to realise that sustainability measures would not only cost money, but that money could also be made through these measures. He also noted that people in general still really needed to change their way of thinking and acting. The chemical industry interviewee noted that some companies were also taking measures with a return time that was longer than the five years aimed for in the Environmental Management Act. He argued that the industry sector parties were relatively easy to get along in the transition, as they were few, but he considered the link to the consumer and voter as the most difficult, "because they vote 'with their feet', and well, politics remains politics."

One civil society interviewee was very optimistic about the change in thinking already happening in society, and mentioned that this view was shared in the rest of his team. The other civil society interviewee noted that in the past five years, things had changed; more and more people had been installing solar panels and wanted to stop using natural gas. Additionally, because of the Paris Agreement, climate change was addressed more often on TV, and there was more awareness regarding all parts of the transition. She was, however, very critical about whether the change in thinking was happening sufficiently within politics; "if you want to take one and a half degrees seriously, then you *have* to reach net 0 emissions in 15 years' time, and that has not got through at all, not to any politician, so we are not on that track at all. We *are* looking to see how we can do more, so I am happy with the new cabinet, that they have introduced all sorts of new things that weren't there before, and of course I understand that, with four coalition parties, they won't move to 100% sustainable energy in 2030 all of a sudden."

The regional ENGO stated that civil servants in the large municipalities and the central government seemed to realise the importance of tackling the climate change problem. "But then of course it comes down to the political game, if they are willing to stick their neck out in the short term, for the benefit of the long term." He felt that the feeling of urgency was not sufficiently present in the smaller municipalities, and those did not have many knowledgeable civil servants to work on the issue, so that was a point of concern. The national ENGO interviewee agreed with the point made by the regional government interviewee that people tended to overestimate how fast the transition process was going. "Nowadays, everyone nearly thinks like 'if I have a couple of solar panels, I'm all done', while of course that is only a small part of your energy consumption." However, he added it could also be considered as a good first step. He argued that, unfortunately, the climate change issue would only become truly tangible if it went horribly wrong, something that really could not happen in this case.

One of the experts noted that three out of the five targets set in the 2013 Energy Agreement were not within reach, but that sustainability was currently really gaining momentum on *all* fronts of society, for example by companies taking pro-active measures. However, he added that people needed to realise that for a company, the reason of being is to make profit, not to save energy. Another expert said that the VVD party and VNO-NCW were starting to realise they needed to make a shift. He also noted that "they are finding it really hard to make that shift from a moral issue to really an economic issue; are we still in or are we out? We are starting to look a bit like a post-industrial society like England was, they were one of the first in the industrial revolution, but after they were the last ones to still have gas lamps by the side of the road." In the end, he said, Dutch companies would need to either transform, or be gone in ten years.

Concluding, a balanced representation of actors was going to be important to really make headway in the transition and implementation of climate policy, while all of those actors also needed to change their thinking and acting to some extent. Additionally, all actors needed to realise that they were all responsible for the mitigation of climate change in the end; waiting on each other to act would lead nowhere and decrease the chances of limiting the temperature increase to 1.5 degrees. Instead, they all needed to start implementing climate policy on their own and together. One of the ways all actors could contribute was through public-private partnerships, such as the 2013 Energy Agreement and the upcoming Climate and Energy Agreement. As one of the civil society interviewees indicated, transparency was one of the elements needed for citizens to fully participate in the process.

4.3. Past performance
"Ambitiousness of the policy and targets" and "Progress too slow"
The ambitiousness of the national Dutch policy and the targets set was addressed by many interviewees, and framed as an element that had been undermining the past performance of the various Dutch cabinets. The ambitiousness of the targets can influence the effectiveness, as effectiveness is measured through the achievement of desired outcomes, or targets. So when the targets were really ambitious and they were not reached, the policy was not effective. But when the targets were not ambitious enough and were reached, was the policy effective? Thus it was not only important to note whether targets were reached or not, but also how ambitious they were in the first place.

The local government interviewee doubted whether the policy and the measures that were presented concretely enough in the coalition agreement were ambitious enough to become climate neutral in 2050. When asked where the biggest room for improvement was within climate policy, he replied: "ambition". He noted that the ambitiousness was too much influenced by large companies, by slowing the process down as they really had a finger in the pie. The regional government interviewee said that some policy, for example making the polluter pay, was not sufficient, but she added that the ambitions stated in the coalition agreement in that regard gave her hope.

The agricultural industry interviewee stated that the ambitiousness of the targets was not going to be the issue, as the Dutch government had set the reduction target at 49% for 2030 (while the EU target was 40%), and was even lobbying in the EU to up the target even further, to 55%. However, he noted that some of the policy named in the coalition agreement, such as the CCS, might not be developed far enough to apply it effectively and efficiently, apart from the fact that he thought it was not a sustainable solution. Even though the 49% was an ambitious target, he also mentioned that some targets had been adjusted in a downward fashion in order to still reach them, instead of trying to get

as far as possible with the original goal. "So those vary, because first they said 20% [the target for sustainable energy production], and then 'well, that is going to be hard, let's agree on 16%', the Energy Agreement says 14%, so they also view it a bit pragmatically, like 'PBL, calculate this, oh we're not going to make it, so then we'll simply lower the targets.'" The business sector interviewee noted that the ambition was really quite high, and argued that the ambitiousness should be kept realistic, "because if everyone thinks 'it is unreachable anyway', you also lose a part of the motivation, and then it becomes far too expensive as well, and not just for the business sector, but definitely also for the households, so I think this level of ambition, it is really quite high, but we *do* have a positive attitude towards it, because it is also somewhat realistic still." He stressed that the ambition some parties had to become CO_2 neutral by 2030 already was very unrealistic. "Of course, ideally it would be that way, but well, come up with a good plan then, I mean when you look at the built environment, we have approximately 8.5 million buildings in this country. If you want to be CO_2 neutral by 2030, you need to, say we have ten years, renovate something like 700.000 or 800.000 buildings each year. Impossible. At the moment we are happy when we reach 30.000 or 40.000. […] I understand that it is going too slow for some, but I think that the cabinet, with that 49%, chose a realistic medium between that idealistic big-headed practice by some parties who I will not name, and those parties that say 'well, we should do very little'."

One of the civil society interviewees said the exact opposite of the business sector interviewee. Her organisation, Urgenda, wanted the Netherlands to operate on 100% sustainable energy by 2030, and reach net 0 emissions by then. "Then you need to make all houses energy neutral, we all need to drive electric cars, we need to tackle industrial processes and start producing very much solar and wind energy and then you're there, greenhouses running on geothermic energy and then we are done". The issue was that these actions were not undertaken fast enough, "because we have known for some time how to make greenhouses energy neutral, still there are only a few in the Netherlands, and in the past ten years we have not really made headway, so as a government you could help there, and the industries all know how they *could* become energy neutral by 2030, but for various reasons they don't do it, because they think 'well, if I'm the first to adopt a new technique on a large scale then I get the teething problems and others will benefit from that', so everyone is looking at each other, so then you could say as a government 'well I will help the first one, or I put those companies together and push them to put money in a jar together to account for those first teething problems', so there is a lot you can do. […] there are sufficient keys to, if we *really* wanted to, if we felt the urgency, to transition to net 0 emissions and 100% sustainable energy in the next 15 years." So she argued that in fact it could be possible to reach net 0 emissions by 2030, given that everyone started acting straight away, helped along by the government where necessary.

The national ENGO interviewee noted that the aspirations stated in the coalition agreement were ambitious, but he wondered whether everything was going to work out, as the window to reach the 1.5 degrees target was not that big anymore. He also argued that "the more radical you are in your target, the more nasty solutions you will need you don't consider sympathetic from an environmental perspective". The regional ENGO interviewee said that he noticed an upward trend in government attention for climate change. However, he also argued that it was not going to suffice to only increase the targets, but concrete steps to reach those targets were also required. He was not so positive about the past; when asked if set targets had been reached in the past, he responded: "well look, if you set no targets then you easily reach them." He also noted that "the fact that we have always been on the natural gas tap has made us very lazy, a general opinion you know, of everyone".

One expert noted that the targets were becoming less ambitious, but more realistic because of that, and easier to reach. According to him, the targets had been too ambitious before and he made a similar point to the business sector interviewee, but also put it the other way around: if targets were set with limited ambitiousness, people would think they are easy to reach and so not much would actually happen, but if targets were set that were too ambitious, people would not believe they are achievable and not be motivated either. So he argued there had to be an interplay between those two options. He also argued that setting high targets initially that could not be reached was part of the transition process. In line with that he stressed that it was hard to determine what was in fact realistic, and that part of the transition process was about finding out how to proceed, and what was the most efficient way. Another expert noted that the newly formed cabinet had many good intentions, but that the policy to support those intentions was weak. "There are barely any measures in the coalition agreement, only possibilities, the only hard thing in it is that in 2030, so in twelve years, they want to have decreased the CO_2 with 49% compared to 1990. [...] in essence the cabinet has very firm intentions with this coalition agreement, but few concrete measures, and as far as they *are* concrete, like CSS, everyone actually knows 'yes, but we are not going to do that, because it is far too expensive'."

The theme "Ambitiousness of the policy/targets" also linked to "Progress too slow", as the progress made on the national level was heavily influenced by the policy in place and its ambitiousness. Various interviewees gave examples of where progress was not made fast enough, and considered this to be an important element of the effectiveness and efficiency of the Dutch climate policy. However, others also aired the expectation that the speed of the progress was going to increase significantly over the coming years.

The local government interviewee indicated that progress was too slow, as everyone was pointing to the other instead of saying: 'it does not matter what the others do, we are going to do it anyway'. He argued that the competition with others really slowed the process down. Additionally, as mentioned before in other themes, he also felt that the national government was not contributing enough to facilitate progress at the local level. The regional government interviewee observed that many things had only just started to become more sustainable, such as road construction, housing, and purchasing sustainably. She also noted that within the 2013 Energy Agreement there were not enough facilities to make sure the participants kept innovating: "the Energy Agreement really was a snapshot in 2013 with long-term agreements we are still working on today, but a model in which you are triggered to apply innovations, to scale those up, to learn from it, well that does not really exist. [...] it is very much aimed at agreements you made back in 2013, and it not equipped to challenge actors to also develop new things." Because of that, she argued that the new Climate Agreement should be developed in such a way that actors would be encouraged to do more than what they agreed upon in year one, where possible.

The business sector interviewee gave the example of the newly built houses in 2017; 75% of those were still fitted with a natural gas connection, and old housing was not being improved fast enough, so "between intention and actual deed there is still such a large discrepancy really, and because of that the goal for 2030 is only becoming more substantial." However, he also expected the emission reduction progress to increase rapidly towards 2050, more towards exponential progress, as he noted that such an acceleration happened in all transitions. That at some point, it would become possible to upscale certain technologies, which was not possible yet at present, at least not cost-effectively. The chemical industry interviewee stated that he considered the "consumer" to be the biggest problem in reaching progress; it was hard to get them to make big changes without needing to seduce them. He argued that they needed to be obliged to take certain action, because it was unrealistic to try to nudge

5.000.000 households to make the change. He also noted that the "climate paupers" – the people who did not have much money already – were struggling because of the higher energy bills, and that discussions regarding this issue did not help to upscale certain things. Thus, he felt a solution was needed to deal with this problem, and to deal with the nudging of consumers in general, as they were slowing down the transition process.

As noted earlier, one of the civil society interviewees noted that not much progress had been made in the Netherlands in the ten years prior, while in many instances, companies or sectors *did* know what needed to be done and how. She also noted that "when you deduct the little biomass we are currently putting into the coal-fired power stations, we have less than 3% sustainable energy, so we really are the boy in class that is all the way at the back, both in the OECD and in the EU we have the least amount of sustainable energy, also biomass co-firing isn't really sustainable, so we can't really say that we are doing very well, and our CO_2 emissions have *not* gone down since 1990." She realised that transitions did not finalise in a matter of a few days, but that the speed of the process needed to be increased, for example by making people buy sustainable items when old devices broke down, cars and boilers for example. Still, she expected 2018 to be the year of speeding up the transition process, with many new projects, and things really starting to move in the right direction. The other civil society interviewee was happy that climate change was finally clearly addressed in the coalition agreement, but he felt that the actual content was still minimal. Also, he said that "it [the large-scale transition from fossil to sustainable energy] is not going to happen, so if you ask: 'is it possible?' Yes it is. But are we going to do it? Then I say that it's very unlikely with the current cabinet, the current political relations, so it means that we have to factor in that we will keep lagging behind enormously." By this he meant that two of the political parties in the coalition, the VVD and CDA, did not have the political room to really deliver on good climate policy; "they won't do that, it would be political suicide, so you won't get the structural measures".

The national ENGO interviewee argued that the Netherlands was really a city and should be compared to an urban area, like London or Paris, and not to a country with much space, such as Denmark for instance. Because of that, many things were not easily possible, due to the limited amount of room available for solar fields or wind turbine parks. He noted that the Netherlands was heading towards the group of leaders again because of the development of wind at sea, but that the transition of the energy-intensive industry was initiated only recently, because of the natural gas the Netherlands could easily exploit. The regional ENGO interviewee stated that mitigation efforts had not been sufficiently present in the Dutch climate policy, and argued: "we need to start doing things on the double, and it's not that I'm saying 'it is all wrong', but the choices, it is all just a fraction too slow; the coal-fired power stations can close within the foreseeable future, not in 2030".

One of the experts argued that the pace at which things were changing needed to increase on all fronts and gave two examples: "In the built environment you see that the pace at which the built environment is made more energy-efficient, well, that is far too low still to achieve a nearly natural gasless housing stock by 2050, right? Really large progress still needs to be made there. [...] And CCS, well okay it is quite much of course, those 20 megatons in total, but well, it's not unthinkable, it's not unthinkable technically that you could reach those kinds of volumes in twelve years' time, but that *does* mean that you really need to speed up the process, in the years to come you would really need to achieve one or two good demos". He also noted that the Dutch could have started earlier with developing sustainable energy; a target had already been set in 2009, but the actual working towards that target got going quite slow. Finally, he also observed too little had been happening, because certain responsibilities were not clear in the governance structure, for example: who would decide if energy networks would

be converted? Would that be the municipality or the network company? Because of those ambiguities, people were waiting on each other and too little was actually happening. Another expert noted that three out of the five goals that were set in the 2013 Energy Agreements were not within reach, and that at the current pace, the 49% target also would not be reached in 2030. However, he also noted that between 2005 and 2016 the increase in sustainable energy was twice that of the 20 years before, and he stated that this rate of progress would only increase. Furthermore, he also argued that one should take the inertia of for instance the energy sector into account; starting the transition was one thing, but before everything was properly implemented, decennia would pass. The third expert noted that "there have been good intentions for 30 years, but the implementation of climate policy through effective measures, that has actually been lagging behind for 20 years". He was positive about the developments in wind at sea, and reasonably positive about wind at land, as well as solar panels, but "saving energy in the industry sector is not working out at all, and that is a big shortcoming, because two thirds of the emissions, or at least half, have to do with the industry sector; blast furnaces, the refineries in Rotterdam, and then I don't even count the bunker oil we use at sea, but well, the fact that the industry is having a hard time to get to it, that is very sloppy in the Netherlands, yes."

Concluding, most interviewees considered the policy introduced or proposed by the newly formed coalition as not concrete enough. Even though multiple interviewees were glad that climate policy was addressed more thoroughly by the cabinet than before, some were also wondering whether the cabinet would be able to deliver on their intentions. The dependence on natural gas had slowed down the efforts to come up with alternatives for the large energy-intensive industry, according to multiple interviewees. Regarding the effectiveness, targets were not set at all, they were too ambitious, or not ambitious enough, because the relevant policy was not sufficiently present, and lagging behind the good intentions. Because of the dependence on natural gas, the Dutch climate policy had been quite path dependent, as there was no real sense of urgency to come up with alternatives until recently.

"Long-term stability/continuity of the policy"
Certain interviewees considered the stability or continuity of Dutch climate policy to have been undermining its overall effectiveness and efficiency. The Dutch government can change radically at least every four years (as there are general elections every four years, unless a cabinet is not able to fulfil its four-year term when it loses the support of the parliament). As the government changes, the policy could also be changed significantly by the new coalition, leading to many ad hoc, short-term policies and little stable, long-term (climate) policies. This could also lead to a decrease of investment in certain technologies, as a certain subsidy scheme might not be maintained when a new cabinet takes office.

The regional government interviewee noted that the current policies were not functioning properly, but that those policies *did* offer a certain certainty, which was really appreciated. She also argued that if the new coalition wanted to change the current policies, they would need to do so in the short term, to ensure the certainty for (business) organisations, so they would invest. "I think that is essential, that you offer long-term certainty to ensure investments."

The agricultural industry interviewee noted that entrepreneurs needed to have continuity in the policy in order to feel secure enough to do long-term investments, but that this had not always been the case. "Entrepreneurs simply need a long-term perspective, continuity in the policy, so they know where they stand [...] I have to say that over the past year, it has sailed into reasonably calmer waters, but is has really been like this [made big up and down gestures with his arms] over the past ten years, so it has made many entrepreneurs a little fearful to still take that step." The business sector

interviewee stated that "the cabinet is responsible for facilitating the CO_2 transition, by which I mean: immaterial, so investment security, clear regulations that don't swing around time in time again, and material, investment capital, that they can invest together with the market for instance, and well also subsidies". The chemical industry interviewee noted that the government had done well in terms of efficiency, especially cost-efficiency. However, his main critique would be "let's say the moment of stopping a policy. Do you maybe need to think more about how long to practice it, in order to facilitate the next wave? [...] many things have been picked up and tried, maybe not always practiced long enough".

One civil society interviewee argued that "over the past 20 years, the government has very much practiced a stop-and-go policy. When something was successful they would stop it again, while you should really push on instead, so we are really bad at upscaling, we do a pilot project, wrap a ribbon around it, a party, minister on the podium, and then we move on to do something else already and that is exactly the issue, so the art is instead to upscale things to ensure that things that run properly also become more substantial." She also stated that many entrepreneurs dealing in solar energy moved away from the Netherlands to take their business to other countries, because the Netherlands simply did not have a solid, long-term policy. She gave Denmark and Germany as examples of where it *had* been going well, as those countries had been far more persistent in maintaining certain policies for longer periods than the Netherlands had.

One of the experts noted that, during the development of sustainable energy, there had been all kinds of system changes, and "system changes always cause a certain uncertainty in the market, when you announce that something in the funding is going to change you always notice a hiccough in investment decisions and for a year nothing could happen if you hit a tough stretch of road. [...] So system changes are always dangerous and thus bad for progress, so the continuity of policy has been a very important issue of learning in the past 20 years". However, he also mentioned that the SDE+ arrangement, which had been present since 2011, had remained mostly the same, so he argued that the policy had become more stable over the past few years in that sense. Another expert stated that the Dutch climate policy had not been efficient, "because every cabinet had a new policy, the energy policy in the Netherlands is characterised by wobbling from one side to the other; then natural gas, then coals, then nuclear, and now it's wind at sea, a very precarious energy policy, and well – oh we *do* have a very good water policy in the Netherlands, that's really well developed, the energy policy is a stepchild".

Concluding, the efficiency of Dutch climate policy had been undermined, as the policy was changed often, so when a certain programme was working properly and could be scaled up, it would be stopped and replaced by something else. When something like that happens, the investments put in the first programme cannot be (fully) returned, and new investments are required to start the new programme. Additionally, this leads to uncertainty in the market, and investors and entrepreneurs will be more hesitant to start working on and investing in the new programme because of that, slowing the progress. Or the investors simply move to a different country, where policy is more solid, as one civil society interviewee pointed out. The extent to which the effectiveness had been undermined was hard to measure, as one could not be sure what would have happened if the successful programmes had been kept active for a longer period. Still, it was safe to assume that the stop-and-go policy would not have had a positive effect on the overall effectiveness of Dutch climate policy.

A few interviewees also addressed certain government investments or stimulation that, according to them, had been very unsustainable, while they were being or had been promoted and subsidised as such. So this theme was not about the stability or continuity of the governmental policies, but about what things were stimulated and whether they were actually sustainable or not. A few specific examples of where unsustainable options were subsidised were given by multiple interviewees, and one could argue that those government investments or stimulation policies could have undermined the effectiveness and efficiency of Dutch climate policy.

One civil society interviewee addressed the example of renovating housing from label F to label B. "Proper research has been done regarding the factual emissions of houses that are classified as label B, and a renovation from label F to label B does not have an impact on the emission. [...] It could even have worked counter-productively, because we are currently having that discussion with housing corporations, that a renovation to label B is suboptimal if you want to improve it further to CO_2 neutral, so you have put solar panels on the roof, installed double glass, all of that needs to be removed again, to renovate again, so double costs towards CO_2 neutral. [...] So we are currently having a renovation done in my neighbourhood, to label B, and the emissions of the neighbourhood and the costs for the citizens will both rise. And there is a significant governmental subsidy allocated to it". The research he mentioned was conducted by Majcen and Itard (2014), who concluded that the factual energy saving was often lower than the theoretical energy saving calculation predicted; renovating a house from label G to label A in reality would save 22% per house in total primary energy use, instead of the theoretical 71%, and from label F to B only about 11% in reality (Majcen & Itard, 2014). However, the report did not take the emissions from the renovation itself into account, so it was not possible to conclude whether a renovation from label F to B had a net negative effect in terms of emissions, based on this report. Another unsustainable policy this interviewee addressed was the biomass co-firing in coal-fired power stations. This was being subsidised through SDE+, while the process was not CO_2 neutral (this was addressed earlier in the "Business sector influence" theme). The other civil society interviewee gave an entirely different example: the subsidies for a car, the Mitsubishi Outlander. "It simply is a very unsustainable car with which you can drive electrically for 25 kilometres, yes, but the rest of the time those people drive 1 in 8, you know? Well that's simply stupid, you could have done that differently, because I feel that you should favour electrical driving to fossil driving, but you should do that by connecting it to the emissions and if an Outlander can only do 25 kilometres after which it does 1 in 8, well then it is an unsustainable car and then it won't get any subsidy at all." She also argued that civil servants often counted on the good side of people too much, leading to arrangements being misused.

The regional ENGO interviewee noted that burning wood was "just as filthy as coal or lignite even when you burn it, regarding CO_2 emissions." And, as mentioned before in the "Sectors lacking policy" theme, he stated that "when it becomes cheaper to burn it than to use as lumber, something is obviously wrong", which was all because of the subsidies. He also noted that one could consider minister Wiebes taking control as "vigorous", but he warned that it could also lead to "very stupid" measures, or measures that would not be supported by the people.

Concluding, the Dutch government had been stimulating several things that clearly were unsustainable, or where question marks regarding their actual sustainability had surfaced (in the F-B label renovation for example). These governmental policies have undermined the effectiveness of the Dutch climate policy, as they were not stimulating the right things, and these policies had not been helping to reach sustainability targets. Additionally, the policies also undermined the efficiency, as the

subsidies used to fund the examples from the previous paragraphs could have been used differently, to stimulate things that *were* in fact sustainable. For example to keep properly working, sustainable policies in place, which was clearly not always the case, as illustrated in the previous theme.

4.4. Unlinked themes

At the end of the coding process, certain themes could not really be matched with one of the dimensions. One of those was in fact quite relevant still, even though it could not be directly linked. Therefore, this theme is discussed in this section, separately.

Capacity to implement new technologies on a large scale

Even though this theme could not be explicitly linked to one of the analytical dimensions or its criteria, this was regarded as an important element by multiple interviewees. The point made was that a government could invest financial resources in developing a certain technology or sector, but if the capacity was not sufficiently present, only providing financial resources would not do the job. One of the aspects that was often mentioned was that the technicians needed to be properly educated and trained, and that more people needed to be educated in general.

The regional government interviewee noted that the transition needed to be properly planned, as the various sectors would not be able to implement a big change at once, everywhere at the same time. "When you request that everything is done *now*, change *all* street lighting in year one, the market can simply not cope with that, they simply cannot deliver right now, so then you also need to start thinking about how to organise that together, and take time for that." So she noted that such a transition was going to take time, and that the governments should challenge parties and lay the ground work.

A civil society interviewee noted that when people renovated their house, they were likely to get bad results, as he said that the technicians did not know how to do it properly. Consequently, this process was both ineffective and inefficient, as improving a house was very costly and there was no official guarantee of a good outcome in terms of energy performance. The other civil society interviewee argued that "education needs to fit better with the economy of the future, for instance by educating technicians that *are* able to install solar panels and boilers". Like the regional government interviewee, she also stated that the government should lay the ground work to speed up progress.

The regional ENGO interviewee said that "we are faced with a very big problem that we simply don't have the technicians, so intermediate vocational education students [Mbo'ers] who have been educated, as well as those that are working as an installer for example, generally they are not really able to install these new things. So in-service training, retraining, but also training in general and attracting much more people to vocational education that want to start working on this, that is.. [key]".

One of the experts argued that the financial budgets did not limit the development of certain technologies in the Netherlands and argued that the budget were in fact sufficient. He thought the development of the production sustainable energy was being hindered by other factors, being capacity related: the industry needed to be able to supply projects with the right workers and materials, and the right conditions needed to be present. His point was that the innovation sector needed to be facilitated and stimulated in more ways than only providing financial resources, so accompanying work could also be done.

Concluding, it is important to take account for the capacity of a certain sector to implement certain (new) technologies. When this capacity is insufficient, certain technologies cannot be implemented properly, undermining the transition progress in the process. And when a policy cannot be implemented properly, it will not be successful, even when sufficient financial resources are made available to cover the costs.

5. Discussion and conclusion

This chapter contains the discussion and the final conclusions. First, the main research question and the sub-questions are answered. Second, the unexpected findings are addressed and explained. Third, the comparison to other research is made, focussing on Averchenkova and Bassi (2016). Fourth, the limitations of this research are discussed. Fifth, the wider generalisation and application of this research is noted. Sixth, possibilities for future research related to and building on this research are suggested. Seventh, the final conclusions are presented.

Research questions

This report started with the overall objective to *determine the credibility of the Dutch pledge to implement the EU NDC (of 40% GHG emissions reduction by 2030), by investigating the Dutch rules and procedures, players and organisations, and past performance regarding climate policy*. This objective was followed by the general research question: *What is the credibility of the Dutch pledge to implement the EU's NDC target of 40% GHG emissions reduction by 2030?* This question was split into three sub-questions, which I will now answer.

The first sub-question was: *How is the implementation of the EU's NDC target supported by the Dutch rules and procedures?* Based on the outcomes of the interviews, the answer to the first sub-question is that the implementation of the EU's NDC target is not sufficiently supported by the Dutch rules and procedures. In terms of the *rule of law* and its indicator law and order, the Dutch society scored quite low; the Dutch government had not been making sufficient use of its capacity to change or introduce new laws and concrete policies to support the implementation of the NDC target. The little hard law that was in place was not being enforced sufficiently. Additionally, the Dutch policies had not been able to reduce the CO_2 emissions since 1990. Regarding the *fairness* of the policies and its indicators the precautionary principle and the polluter pays principle, multiple interviewees noted that fairness was an issue, including money transfers from poorer to richer people through subsidies, the large polluters having to pay less for their CO_2 emissions than citizens, and some sectors lacking national climate policy altogether while they were among the most polluting. The civil society and ENGO interviewees generally argued that the precautionary principle was not being applied sufficiently, while others did not give a clear answer on the subject. Almost all interviewees agreed that the polluter pays principle was not applied enough in the Netherlands, but an argument against the polluter pays principle was also made by multiple interviewees, who claimed some companies would move away to a different country if that principle was enforced more.

The second sub-question was: *How is the implementation of the EU's NDC target supported by the players and organisations, both individually and collectively?* The answer to this question is somewhat more complicated than the answer to the first sub-question. On the one hand, one could say that many stakeholders had the possibility to be involved in creating climate policy, and that the Dutch climate and energy field was quite open and transparent. On the other hand, it became clear that some actors could exert more influence over the process, that it was hard to hold each other accountable, and that the general public did not view climate change as a very urgent matter. So the implementation of the EU's NDC target was reasonably supported by the players and organisations. The criterion *participation* and its indicators creating and implementing climate policy, and the presence of PPPs, scored reasonably well. Most interviewees agreed that they had sufficient opportunities to become involved in the creation of policy, but some argued that some actors had a bigger influence than others, thus limiting the actual influence some actors had. Some interviewees also admitted that their own organisation could do better in the implementation part, in their own climate policies. Many

interviewees noted that although climate change was getting more attention, the sense of urgency was still not strong enough among the general public. There were some good examples of PPPs, such as the 2013 Energy Agreement and the Energy Agreement of Gelderland, both involving many different stakeholders, and which included joint targets and programmes. The criterion *accountability* and its indicators participatory accountability and transparency also scored reasonably well. Regarding the participatory accountability, most interviewees agreed that there was a balanced representation of actors in the two energy agreements, although some interviewees also argued that they could hold each other accountable for their actions. Most interviewees also agreed that the energy and climate arena of the Netherlands was quite open and transparent.

The third sub-question was: *How has the past performance of the Dutch government been in (inter)national climate policy and what does this indicate for the future?* The answer to this question is that the past performance of the Dutch government had not been sufficient. Changes in policy, which happened often, had been undermining the effectiveness and efficiency of the Dutch government. The reliance on natural gas had made the Dutch path dependent on this technology, which meant that there had been little incentive to develop new policies and technologies on a large scale. What it indicated for the future is hard to say for effectiveness and efficiency, as this all depended on whether the Dutch would succeed in maintaining successful policies for a long period in order to keep it stable. One thing that could be said is that, were the Dutch to continue to change policies so often, one could expect the performance to remain the same. The first criterion, *past effectiveness and efficiency*, and its indicators, achieving objectives and inputs, scored quite low. Regarding the objectives, the interviewees noted that some targets had been met, while others had not; the Netherlands had decreased their emissions of most GHGs, but not those of CO_2 (these had in fact increased) compared to 1990 levels. Additionally, the targets for sustainable energy production were most likely not going to be reached and had also been adjusted downwards twice. Most interviewees agreed that the inputs time-wise had not been efficient, as for example a sustainable energy production target was already set in 2009, but not enough had been done during the first years to also reach that target. Additionally, the policy was often changed, meaning that over a certain period of time, different policies would apply and some would be reversed, slowing down progress. Regarding the financial inputs, most interviewees did not specifically address it, but one posed the question whether the energy transition could happen cost-effectively. The second criterion, *path dependence*, and its indicators, technological and policy path dependence, also scored quite low. Regarding the technological path dependence, some interviewees argued that the Netherlands had been quite path dependent, which was partly because of the natural gas reserves. Much of the development costs of some technologies had been paid by countries such as Germany, but the Dutch government had really been making headway in energy produced through wind turbine parks at sea. By 2018 the Dutch government needed to come up with new technologies, as the exploitation of the natural gas bubble in the province of Groningen had become problematic due to earthquakes and damage to buildings, leading to public opposition. Most interviewees agreed that the Netherlands had been quite path dependent in its climate policy, mostly due to the presence of fossil fuel sources. Some noted that there had been successful, innovative programmes, but many policies were simply not held in place long enough, so in the end these programmes did not result in big system changes.

So, now I can also provide the answer to the general research question: *What is the credibility of the Dutch pledge to implement the EU's NDC target of 40% GHG emissions reduction by 2030?* I would argue that the credibility of the Dutch government was quite low, based on the lack of enforcement of the little hard law that *was* in place, the large influence of the business sector, the lack of the sense of urgency of the general public, the lack of continuity in policy in the past, and the slow rate of progress.

However, time will tell if the Dutch government and society as a whole are in fact going to reach a turning point in the near future, with a new Climate Agreement and Climate Act in the making. This will show which way the Netherlands is really going, as the proposed policy in the 2017 coalition agreement simply was not concrete enough to also be credible.

The findings described above mostly were expected, as it was already noted earlier in this report that the Netherlands was making full use of its natural gas bubble, that new cabinets could differ substantially from the previous and thus create new policies that did not necessarily build on previous policies, and that that the Netherlands was quite low on the European list of sustainable energy use. The question was if, in spite of these issues, the various stakeholders involved would be able to overcome this together and really make fast progress through the creation and implementation of new legislation and policy. Also whether the signing and ratification of the Paris Agreement had really set in motion large shifts in policy. As the findings show, the Dutch society has not quite come far enough as yet.

Unexpected findings

An unexpected finding was the "Capacity to implement new technologies on a large scale" theme. In advance, I had mainly focused on the question whether sufficient financial resources were being and had been made available to implement new policies and technologies. I had not realised that the actual *capacity* to implement policies and technologies did not only depend on the financial resources put into it, but also on the development and education within a certain sector. The reason for this was that I had not come across capacity as a major theme in the literature used in the theoretical and analytical framework. Therefore, the different components of capacity did not surface until they were addressed by some of the interviewees. The fact that this finding was not anticipated could also be a reason that there was no clear link to one of the three dimensions of credibility.

Another unexpected finding, or rather the lack of finding, was the fact that only two out of the twelve interviewees addressed the forestry sector as a possible means to contribute to the net reduction of CO_2 emissions. Additionally, as mentioned before, the forestry sector was also completely left out of the equation by the coalition, as they did not address the forestry sector at all in the coalition agreement. The lack of attention for and interest in the forestry sector was not anticipated, as forests play a very important role in mitigating climate change and could be a cheaper alternative to new technologies such as CCS. Additionally, as noted before, forestry had become an important topic at EU level, as part of LULUCF emissions. Therefore, it would have made sense if the interviewees had devoted some more words on the topic.

Comparison to other research

As the 2015 Paris Agreement was created and signed only a few years before this research was conducted, there have not been many studies focussing both on credibility and climate policy within the Paris Agreement to compare this research to. However, there was one, which was also the main inspiration for the focus of this research: *Beyond the targets: assessing the political credibility of pledges for the Paris Agreement* by Averchenkova and Bassi (2016). Their research took a more quantitative method, and focused on multiple countries, but less in-depth than this research. Averchenkova and Bassi looked at the G20 countries and did not include the Netherlands individually, but they did include the EU as a whole.

Averchenkova and Bassi (2016) noted that the EU, together with Mexico, had the highest credibility based on their policy and legislation; "*these countries have framework legislation in place and relatively strong low-carbon policies: they all have enforced a form of carbon taxation or carbon trading*" (p.34). Even though the Netherlands has a framework climate law since June 2018, the targets in this law are aims and are not legally binding, and the policy needed per sector to reach the targets was, at the moment of writing, not presented yet. Additionally, multiple interviewees argued that the ETS was not functioning properly. Even though the Netherlands is only part of the EU, the statements about ETS matter for the whole EU, so in this case the fact that a form of carbon trading is enforced does not necessarily mean that it is also effective. This also applies in general; Averchenkova and Bassi's research was quantitative, meaning that more in depth examination of certain indicators was not done, meaning some of the indicators do not signify much by themselves. This is shown by the example above, but also goes for whether overall long and short term targets were set, and how many Multilateral Environmental Agreements (MEAs) had been ratified or withdrawn from. The indicators do not express anything about the concrete policy around those issues and how rules and procedures are being enforced, and thus how hard countries are really working to perform and make a difference in the mitigation of climate change.

Averchenkova and Bassi (2016) also noted that the "public opinion", in which they looked at the seriousness of climate change as perceived by the public and whether people thought if climate change was caused by humans, was "moderately supportive" of the credibility of the EU's pledge. Some interviewees in this research however, noted, based on the 2016 Motivaction report, that the sense of urgency, or "seriousness" as Averchenkova and Bassi called it, was quite low in the Netherlands, as there were many other topics that were considered to be much more important. The seriousness made up only half of the score, but there was no recent data on the Dutch population about the other half (if people thought climate change was caused by humans[1]).

In the *players and organisations* dimension, Averchenkova and Bassi (2016) distinguished between public and private bodies. Within the private bodies, they included the carbon lobby (value added/GDP) and the environmental lobby (IUCN/10 million inhabitants) here, thus leaving out the civil society lobby, other business actors such as the agricultural sector, as well as other environmental stakeholders. As became apparent, in agreements such as the 2013 Energy Agreement, many more stakeholders were present. The agricultural sector is important regarding emissions from LULUCF, as well as methane emissions for example, so stakeholders such as these need to be included. Additionally, as surfaced in the theme "climate change as a socio-economic issue" in the results section, many interviewees considered climate change as more than only an economic or environmental issue; the social components needed to be taken into account more. Therefore, the participation of civil society organisations is also important when creating climate policy.

While Averchenkova and Bassi (2016) did note that the balance of power between public and private stakeholders had an important role regarding the credibility of pledges, they did not include this power balance in any indicators. Multiple interviewees noted that, at least in the Netherlands, the business sector was having an important influence on climate policy. More than other non-governmental actors, which is why it is important to include this power balance, and the business sector influence in the

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[1] Additionally, placing this indicator under "climate change awareness", creates some question marks for me, as humans do not "cause" climate change, as it is also a natural process. Climate change is a natural process that is *influenced* by human action, not *caused* by humans, so I feel that that necessary nuance is missing here. The researchers chose not to include answers that stated climate change was a result of both natural processes and human activities, so this indicator comes across as a bit biased.

credibility framework. Additionally, governments could also have a stake in certain fossil fuel companies, enlarging the influence of those companies even further.

Averchenkova and Bassi (2016) found that the EU scored very high on the determinant "past policy reversal", meaning it was "fully supportive" of the credibility of the EU's pledge. This is an interesting finding, as many interviewees in this research addressed the fact that the various Dutch coalitions *had* quite often reversed policy of past coalitions. However, relevant to mention is the fact that Averchenkova and Bassi only focused on the reversal of policies they deemed "most important", as their research did not go in depth per country. What the different results indicate is that the more general picture formed could possibly show a misleading image of the actual situation on national and sub-national level. To give an example: one of the indicators they used was the abolition of key climate change legislation. Of course, firstly one could argue about what in fact *is* "key" legislation, but secondly, abolition of many smaller, individual policies can have a significant effect on the overall effectiveness of national climate policy, as examples from the Netherlands have shown.

Averchenkova and Bassi (2016) did not include capacity in their credibility framework. The reason for this is that they considered capacity to be part of feasibility instead of part of credibility. They regarded credibility, feasibility and ambition as the three key issues for international climate action. Feasibility also included the availability of and access to technology and finance. They argued that the feasibility "*in fact determines the maximum level of mitigation effort at a given cost*" (p.8), and that feasibility influenced the credibility, as feasibility was about a country's technical capacity to reach its targets. As they placed capacity among feasibility, it was not taken into account in their research indicators for credibility. Since they argue that it impacts the credibility, and that some interviewees specifically noted its importance in this research, I would argue that it is important to include some form of (technical) capacity in the credibility framework.

Concluding, even though the research by Averchenkova and Bassi (2016) focused on slightly different determinants than this research did, there are some clear differences between the results. I believe these differences can mostly be explained by the different approach in methodology; Averchenkova and Bassi conducted a study that was less in depth and more general than this research, and they did not focus on any country in particular. This was also in line with their aim to "*provide a simplified framework to identify key trends, areas of strength and weaknesses and opportunities for improvement of countries' political credibility vis-à-vis their international climate change commitments.*" (p.11). But to get back to a previous point: the fact a certain policy exists does not necessarily mean it also provides a significant contribution to the mitigation of climate change. Therefore, I would argue in favour of the case study approach taken in this research, as it shows what the actual issues are within the country researched. It might be harder to make vis-à-vis comparisons between countries, as very different issues might surface, depending on whether a country is developed or developing for example, but a case study approach does show what elements of credibility are really lagging behind and how.

Limitations
As in any research, in this research were some limitations that influenced the results. One of those was the fact that I was unable to interview people from the central government, such as the ministry of Economic Affairs and Climate, or one of the elected politicians that are currently part of the coalition. I did reach out to these organisations, but unfortunately I was unable to arrange an interview with them. Because I did not get to interview central government representatives, information on how they specifically approached certain issues, such as the precautionary principle or whether they believed nongovernmental actors were sufficiently included in climate policy negotiations. Another limitation

is the fact that I did not gather sufficient data during the interviews to evaluate the Dutch participation in *international* climate policy, while this was in fact part of the third sub-question in this research. The reason for this is mostly that I did not sufficiently include it in the interview question list, and as I did not interview people who focused on the Dutch participation in the international arena, most interviewees did not really mention the international participation by themselves.

Wider generalisation and application

A limitation that applies to any case study that focuses on an individual country or situation is that it might be hard to generalise its results, to outside the study or situation. In this case, one of the results is the framework I developed around the concept of credibility. The framework was initially based on Averchenkova and Bassi (2016), but it changed significantly based on literature research, and to fit the research aim and approach better. This framework could be applied in other countries as well, to provide a more in depth analysis of how a country is doing in practice, compared to research based on more general indicators such as Averchenkova and Bassi's. Some questions may need to be adapted or added, as every country obviously has its individual characteristics and a slightly different approach may be required. It would be hard to quantify the data of this research to something similar to Averchenkova and Bassi's research, but that was not aim of this research. The strength of a case study like this research is that one can create a clear picture for an individual country and draw clear conclusions on that, instead of just providing a general indication. That clear picture can then be used to determine what elements of credibility still need to be improved and in what way. In the Netherlands for example, this picture showed that the enforcement of law could be improved, the influence of the business and industry sector could be lessened and the technical capacity could be improved, among other things.

The actual content results relate back to the relevance stated in the introduction of this study: to see whether the Netherlands, as an OECD, EU country is likely to deliver on its pledge to fulfil the EU targets. As could be concluded, this is not the case in the current situation, where the intentions are there in terms of ambitions, at least on paper, but no sufficiently concrete conditions to achieve those intentions have been fixed or agreed upon. It shows that the Netherlands is currently not a credible leader in the EU. Therefore, similar in depth research is needed in other countries as well, in order to see what progress has been made and is likely to be made in the near future, also to make an absolute and relative comparison between the Netherlands and other countries. If it then becomes apparent that many countries are not making sufficient progress, steps can be taken to improve that, instead of waiting for the first global stocktake assessment in 2023. The window of opportunity to reach the 1.5 degrees increase target is already closing, so concrete actions need to be taken in every country, and swiftly so. Therefore, I recommend for the credibility framework to be developed further, and applied to other countries as well. For example countries that were also included in Averchenkova and Bassi's research, in order to see how the different approaches relate to each other in terms of findings per country.

Further research

Additional research is needed to shed more light on certain issues that surfaced in this research, which are not necessarily related to the research problem. One of those issues is the question whether the energy transition can happen cost-efficiently. This issue was raised by the local and regional government interviewee, as they noted that the transition would "hurt" financially, while the government has cost-efficiency as a very high priority. If further research shows that such a transition

cannot happen cost-efficiently, a different approach will need to be taken in order to still ensure that sufficient progress will be made.

Also, new research is needed on the climate change awareness and opinions about the energy transition among the Dutch population. The Motivaction research is quite recent, but as the authors of that research pointed out, it was done before it became clear domestically that the Netherlands was not doing well in reaching their targets. Therefore, and because various interviewees indicated that they thought that change in thinking was really happening in the wider society, I feel that new research could contribute to knowing what the Dutch population thinks *now*, and it could also try to find solutions to public opposition to certain policy.

Finally, more research is needed to keep track of national progress in the Netherlands (and other countries), maybe a longitudinal study for the upcoming period until 2023, when the first global stocktake will take place within the Paris Agreement. By conducting longitudinal research, one will be able to identify trends emerging in policies and progress. As such, this research could show whether the pace at which progress is speeding up is sufficient, or that more incentives are needed to reach the 2030 targets.

Final conclusions

The aim of this study was to determine the credibility of the Dutch pledge to implement the EU NDC target, by investigating the Dutch rules and procedures, players and organisations, and past performance, all regarding climate policy. This case study of the climate policy and its implementation in the Netherlands, and the credibility of these elements has contributed to the literature in two ways: firstly, it provides an addition and slight approach to the concept of political credibility which can further be developed and applied. Secondly, it provides an in-depth look into the current situation of an OECD, EU country that is trying to position itself as a climate action leader in the EU. The research has shown that, based on the created framework around credibility, the Dutch government will need to work hard on its climate policy in order to reach their GHG emission reduction target for 2030. Even though the national reduction target (of 49%) has been set higher than the EU target (40%), most interviewees had their doubts about the feasibility of the target when taking the current policy into account.

Besides the national Dutch government, other stakeholders also need to step up, as does the Dutch general public. Although sustainability thinking is gaining momentum and climate change has been getting more attention since the Paris Agreement, for example through the new Climate Law and the Climate Agreement of the Netherlands, actual progress and changes in thinking are not happening fast enough. Many people overestimate the amount of genuine sustainable energy produced and used, and the long-lived addiction to natural gas and other fossil fuels make it hard to realise a large-scale shift. Therefore, the Dutch society really needs to start realising the urgency of the problem, especially as the Netherlands is a low-lying country, meaning climate change could have devastating effects in the long-term through sea-level rise.

This research has shown that the credibility of a country's central government and other stakeholders can give a good insight into how the threat of climate change is addressed by a certain country. It gives a good indication of where the most effort and attention is needed in order to become more credible both inside and outside of the own country, and to improve the country's performance in mitigation climate change. Therefore, credibility is a valuable framework to use when combating further climate change.

The 2015 Paris Agreement, according to some, marked a new beginning of international climate policy. Still, it is up to the signatories of this Agreement, being the individual countries, to implement the Paris Agreement and combine efforts to limit the global temperature rise to 2˚C, or even to 1.5˚C. In order to stand a chance of reaching these targets, every country needs to start making progress fast, both individually and collectively. Countries need to keep evaluating their progress and try to find out how they could improve. Additional future research is needed for all countries, to find out how practice relates to the paper reality, and to determine where the biggest problems and opportunities lie, currently, and in the future.

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Appendix

Appendix A. List of interviewed organisations

1.
Organisation: GroenLinks Wageningen
Type: Local government

2.
Organisation: Planbureau voor de Leefomgeving
Type: Expert

3.
Organisation   Land- en Tuinbouworganisatie Noord
Type: Agricultural industry sector

4.
Organisation: Klimaatverbond Nederland
Type: National civil society

5.
Organisation: VNO-NCW, MKB Nederland
Type: Business sector

6.
Organisation: Energieonderzoek Centrum Nederland
Type: Expert

7.
Organisation: Interprovinciaal Overleg
Type: Regional government

8.
Organisation: Urgenda
Type: National civil society

9.
Organisation: Vereniging van de Nederlandse Chemische Industrie
Type: Chemical industry sector

10.
Organisation: Wageningen University and Research, Technical University Delft
Type: Expert

11.
Organisation: HIER klimaatburasu
Type: National ENGO

12.
Organisation: Gelderse Natuur- en Milieufederatie
Type: Regional ENGO (GNMF is part of the national organisation de Natuur- en Milieufederaties)

Appendix B. Interview questions

Inleidend

1. Wat doet uw organisatie precies?
   a. Waar worden de meeste middelen en tijd ingestoken?
2. Wat is uw functie binnen de organisatie?

Rules & Procedures

1. Wat is wat u betreft de belangrijkste wetgeving of beleid wat de nationale implementatie van het Parijsakkoord zal ondersteunen (op dit moment)?
   a. Waarom?
2. Worden de regels en het beleid voldoende gevolgd in de maatschappij? (*law and order*)
   a. Waarom (niet)?
   b. Voorbeelden?
3. Treedt de overheid goed genoeg op als de regels en beleid omtrent klimaatbeleid niet worden gevolgd? (*law and order*)
   a. Waarom (niet)?
   b. Voorbeelden?
4. Is er momenteel voldoende beleid en regelgeving omtrent de mitigatie van klimaatverandering?
   a. Waarom (niet)?
5. Zijn de maatregelen die zijn omschreven in het regeerakkoord volgens u(w organisatie) voldoende om onze nationale doelstelling van 49% (en dus ook die van de EU) te halen voor 2030?
   a. Zullen de maatregelen voor ieder broeikasgas voldoende zijn? (focus op CO_2, maar hoe zit het met CH_4, N_2O en fluorkoolwaterstoffen?)
6. Wat zijn de belangrijkste voorgestelde maatregelen uit het regeerakkoord?
7. Wat is de haalbaarheid van de voorgestelde maatregelen, zoals het afvangen en opslaan van CO_2, het sluiten van alle vijf de kolencentrales voor 2030, en het invoeren van een CO_2 bodemprijs?
8. Wordt het voorzorgsbeginsel voldoende toegepast in het Nederlandse klimaatbeleid? (*precautionary principle*)
   a. Waarom (niet)?
   b. Voorbeelden?
9. Wordt het principe dat de vervuiler betaalt voldoende toegepast in het Nederlandse klimaatbeleid? (*polluter pays principle*)
   a. Waarom (niet)?
   b. Voorbeelden?
10. Waar is ruimte voor verbetering van het huidige klimaatbeleid?
    a. Waarom?
11. Wat zijn volgens u de belangrijkste dingen die in het nieuwe klimaat- en energieakkoord moeten komen?
    a. Op welke sectoren moet het klimaatbeleid zich richten?
    b. Waarom?
12. Waar is ruimte voor verbetering binnen de huidige wetgeving omtrent klimaat en energie?
    a. Op welke sectoren moet de nieuwe wet zich vooral richten?
    b. Waarom?

Players & Organisations

1. Wat doet uw organisatie om de overheid te steunen in de implementatie van het Parijsakkoord? (*implementing climate policy*)
   a. Wat zijn specifieke activiteiten die door uw organisatie worden ondernomen?
2. Bent u onderdeel van bepaalde coalities of verbonden, zoals het Energieakkoord uit 2013?
   a. Waar besteedt u de meeste tijd en aandacht aan in deze coalities?
   b. In hoeverre is de overheid betrokken bij deze organisaties?
3. Is uw organisatie betrokken bij het maken van overheidsbeleid? (*creating climate policy*)
   a. (Zo ja,) wat is uw rol hierin?
   b. In hoeverre zijn hier mogelijkheden voor vanuit de overheid?
   c. Is er in uw optiek voldoende diversiteit in de betrokken organisaties, zodat er tot zo goed mogelijk beleid gekomen kan worden?

4. Is er in uw optiek voldoende transparantie tussen de verschillende partijen? (*transparency*)
5. Zijn er genoeg mogelijkheden om bepaalde partijen verantwoordelijk te houden voor hun acties? (*participatory accountability*)
    a. In hoeverre gebeurt dit ook en hoe?
    b. Wanneer is de laatste keer dat dat is gebeurd?
    c. Wat was de rol van uw organisatie hierin?
6. Wie heeft de grootste verantwoordelijkheid voor het klimaatbeleid?
    a. Waarom?
    b. Wat houdt die verantwoordelijkheid in?
7. Wie moet voornamelijk verantwoordelijk gehouden worden voor hun acties? (overheden, andere organisaties, burgers?) (*participatory accountability*)
    a. Wie houdt andere actoren voornamelijk verantwoordelijk voor hun acties? (overheden, andere organisaties, burgers?)
    b. Wat voor effecten heeft dat?
8. Is er een verandering in denken gaande bij uw organisatie op het gebied van klimaatbeleid?
    a. Op welke manier(en)?
    b. En bij andere organisaties?
    c. En in de maatschappij als geheel?

Past performance
1. Als we het hebben over klimaatbeleid van de afgelopen 20 jaar, in hoeverre is het klimaatbeleid van Nederland dan effectief en efficiënt geweest? (Kyoto, ETS)
    a. Werden de doelstellingen behaald op nationaal niveau? (*achieving objectives*)
    b. Wogen de uitkomsten op tegen de inputs (qua tijd en geld)? (*inputs*)
2. Zijn de verschillende Nederlandse overheden voldoende innovatief geweest de afgelopen 20 jaar, of juist padafhankelijk?
    a. Ten eerste wat betreft klimaatbeleid? (*policy path dependence*)
    b. Ten tweede wat betreft het ontwikkelen en in gebruik nemen van nieuwe technologieën? (*technological path dependence*)
3. Hoe goed is Nederland als overheid (geweest) in het sturen van het gebruik van fossiele brandstoffen?
    a. Waarom?
4. Hoe goed is Nederland als overheid (geweest) in het sturen van de ontwikkeling van hernieuwbare energie?
    a. Waarom?
    b. Werden er in de loop der jaren voldoende middelen ter beschikking gesteld door de overheid voor het transitiebeleid naar hernieuwbare energie?
5. Denkt u dat Nederland er klaar voor is om grootschalig om te schakelen van fossiele energie naar duurzame energie?
    a. Waarom (niet)?

Afsluiting
1. Is er nog iets waar ik niet naar gevraagd heb, maar wat u nog graag wil zeggen? Belangrijke punten vergeten?
2. Zijn er nog bepaalde personen of organisaties waar ik volgens u mee zou kunnen praten?