

Analysing the challenge of reconciling a prominent fossil fuel industry with climate mitigation policies: a discourse analysis in Alberta, Canada.



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Date: 04-07-2021
Word count: 14962
EC: 30

Abstract

Concepts such as climate change and sustainability have often been discussed at national debates or international conferences. However, the understanding of these concepts can differ for different actors, as there are multiple interpretations of the concepts. As a consequence, actors try to shape the definition of a problem, as this influences the how this problem is dealt with. In such discussions, patterns can be found, which are referred to as discourses. These discourses can influence the policy output, and by analysing them, it can be understood why certain climate mitigation policies are chosen.

This research will look at the province of Alberta in Canada, which has a prominent oil and gas industry due to the oil sands that are located there. As a consequence, this province emits a large amount of greenhouse gas emissions. Such a prominent industry can influence the climate mitigation policies that are implemented, and is therefore relevant to analyse this province. All in all, the following question guided this research: *To what extent, and in what way, do discourses on climate mitigation influence the approaches to reconcile climate mitigation policies with fossil fuel dependencies in the province of Alberta, Canada?*

This research looks at the time period between 2014 and 2020. In total, 150 news articles were collected from four different news platforms, as well as industry reports from three different companies from the oil and gas industry and policy documents. Three discourses were identified during the analysis. Firstly, a business-as-usual discourse that emphasizes the importance of the fossil fuel industry to the economy. Secondly, an environmental discourse that emphasizes the need to reduce greenhouse gas emissions and diversify the economy. Lastly, a green growth discourse that emphasizes the need for both climate action and economic growth, and argues that they are mutually dependent on each other. The discourse that institutionalised into the policy output was primarily the green growth discourse, while the business-as-usual discourse also institutionalised.

Acknowledgments

I want to thank my supervisor James Patterson for providing useful feedback on my research proposal and thesis, as well as for the useful discussions. Furthermore, I would like to thank my fellow students, in particular Lisa Beekman, Pim Rietveld and Freya Endrullis, for providing feedback and help.

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1. Introduction

1.1 Problem description

The concepts of climate change and sustainability have repeatedly been on the agenda of international conferences, such as the United Nations Climate Change Conferences, as well as on national political agendas (Lacobuta et al., 2018; Gao et al., 2017). Furthermore, the amount of climate policies that have been implemented by national governments have increased (Lacobuta et al., 2018). However, these concepts of climate change and sustainability are not understood the same by different actors, but can be interpreted differently (Feindt & Oels, 2005). Environmental problems, such as climate change, are socially constructed, which entails that there are multiple interpretations of that problem (Feindt & Oels 2005; Hajer & Versteegen, 2005). Different actors actively try to shape how a problem is defined (Hajer & Versteeg, 2005), as this influences how that problem is dealt with (Feindt & Oels, 2005).

In discussions, particular patterns can be found, which are referred to as discourses. A discourse is defined as “a specific ensemble of ideas, concepts, and categorizations that are produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities” (Hajer, 1995, p. 44). These discourses are relevant to analyse as this shows why certain understandings of a problem become the dominant one, while other definitions are disregarded, and consequently, why certain policies are implemented and others are not (Hajer, 1995; Hajer & Versteegen, 2005). This is also relevant in the case of climate mitigation policies. Climate mitigation policies are crucial for reducing greenhouse gas emissions and limit global temperature rise (Chao & Feng, 2018). However, these approaches can be resisted by conservative political parties and the fossil fuel industry, among others (Hess & Renner, 2019). Furthermore, research by Johnsson et al. (2019) shows that countries with large fossil fuel reserves have a significant increase in energy demand from fossil fuel sources, causing a threat to climate mitigation approaches. By researching competing discourses surrounding climate mitigation, it can be understood why certain climate mitigation policies are chosen, and the influence of a society’s dependence on fossil fuels.

The province of Alberta in Canada emits more than a third of the total greenhouse gas emitted in the country, most of which come from the oil and gas industry (Boyd, 2019). Furthermore, the oil sands that are located in this province are seen as the largest petroleum reserves after Saudi Arabia (Le Billon & Carter, 2012). Such a prominent fossil fuel industry could negatively influence the stringency of climate mitigation policies such as the carbon tax, as is shown in previous research (Stevens, 2019). Furthermore, it is suggested by Dalby (2019) that being an energy producer is in the national identity of Canadians. In addition, it is argued that being petroleum producers is in the cultural identity of Alberta. This influences the debate on developments in the oil sands (Dalby, 2019). Lastly, Dalby (2019) argued that in order to significantly reduce greenhouse gas emissions and meet the targets of the Paris Agreement, Alberta needs to rethink its political economy.

For these reasons, climate mitigation policies in Alberta are crucial for Canada to reduce their greenhouse gas emissions and meet the objectives of the Paris Agreement. For provinces to reduce their CO₂ emissions, Canada has implemented the Greenhouse Gas Polluting Pricing Act (GGPPA) in 2018, due to which provinces need to implement a carbon pricing system that meets the conditions set by the federal government (Ministry of Environment and Climate Change, 2020). However, in Alberta the GGPPA led to debates around the consequences of carbon pricing on the economy and job security (Murphy, 2019), as the gas and oil industry is the biggest industry in Alberta (Statista Research

Department, 2021). Furthermore, several policies have been implemented with the aim to reduce greenhouse gas emissions, some of which also have been repealed. A focus on Alberta can thus show the challenges of reconciling climate mitigation policies with a prominent fossil fuel industry.

1.2 Scientific and societal relevance

A significant amount of research has already been conducted that uses discourse analysis to research discourses around an environmental issue or policy. For example, Hajer (1993) looked at the discourses around the acid rain debate in Great Britain. Here, he looked at two competing discourse coalitions and their two approaches to stay or become the dominant discourse. Furthermore, Bulkeley (2000) used discourse coalitions to research Australia's response to climate change and identified two competing discourses. Also in international contexts, discourse analysis is used. For example, Cummings et al. (2017) uses critical discourse analysis to research the "discourse on knowledge and knowledge societies" (p. 728) in the final document of the Sustainable Development Goals (SDGs): *Transforming our world: The 2030 agenda for sustainable development*. Lastly, discourse analysis has also been used to analyse discourses in a local context. For example, research has been done on how global discourses influence urban policies (Leung et al., 2018). Furthermore, Stevens (2018) performed a critical discourse analysis to research storylines in media on a wildfire that occurred in Fort McMurray, Alberta, and the tar sands in that same province. However, a limited amount of research has been conducted in the recent years on the influence of competing discourses regarding climate mitigation on the policy output, specifically in an area that is dependent on the use and production of fossil fuels. Thus, this research will elaborate on discourses on climate mitigating policies in a province that is dependent on fossil fuel production and use, and the challenge of reconciling the two.

This research has also significant societal relevance. As was mentioned before, climate mitigation policies are necessary for limiting the global temperature rise and mitigate climate change (Chao & Feng, 2018; Johnsson et al., 2019). However, which policies are put into place depends on the discourses that are present around this issue. This research can contribute to a larger understanding of what the discourses consist of, and how they are institutionalised into policy practices, and thus gain insight in how the policy output is influenced.

1.3 Objective and research question

The aim of this research is: *to understand the influence of competing discourses on climate mitigation policies, by analysing the discourses on climate mitigation in Alberta, Canada*. The research will mainly focus on the time period 2014 to 2020. During this time period, there were different events that could have an impact on the discourses present, and thus changes could occur. For example, this timeframe allows the research to look at discourses two years before the first objectives of a carbon pricing system were released, and two years after the GGPPA was implemented. Furthermore, also two large wildfires took place in Alberta, which was attributed by some to climate change. Lastly, there have also been international pressures on the oil sands and fossil fuel extraction of Alberta (Nickel et al., 2021). However, also accounts of more historic debates influencing current discourses will be taken into account. All in all, this research will be guided by the following research question:

To what extent, and in what way, do the discourses on climate mitigation influence the approaches to reconcile climate mitigation policies with fossil fuel dependencies in the province of Alberta, Canada?

The following sub-questions will guide the research in answering the research question:

1. What are the key tensions between climate mitigation policies and the fossil fuel industry in Alberta?
2. What are the discourses that were present in Alberta on climate change and climate mitigation within the set timeframe?
3. Which discourse(s) achieved institutionalization as reflected in climate mitigation policies enacted in Alberta?

1.4 Research framework

The schematic overview of the different steps in the research can be found in figure 1, including when the sub-questions and research question will be answered. First, a literature review was conducted, which led to the development of the conceptual and analytical framework. In the analytical framework, measures were identified for discourses and institutionalisation, which served as initial nodes while coding the data in NVivo. After the data was coded, the data was analysed and possible links between the discourses and policy output were identified. Lastly, conclusions were drawn and a reflection and recommendation for future research was given.

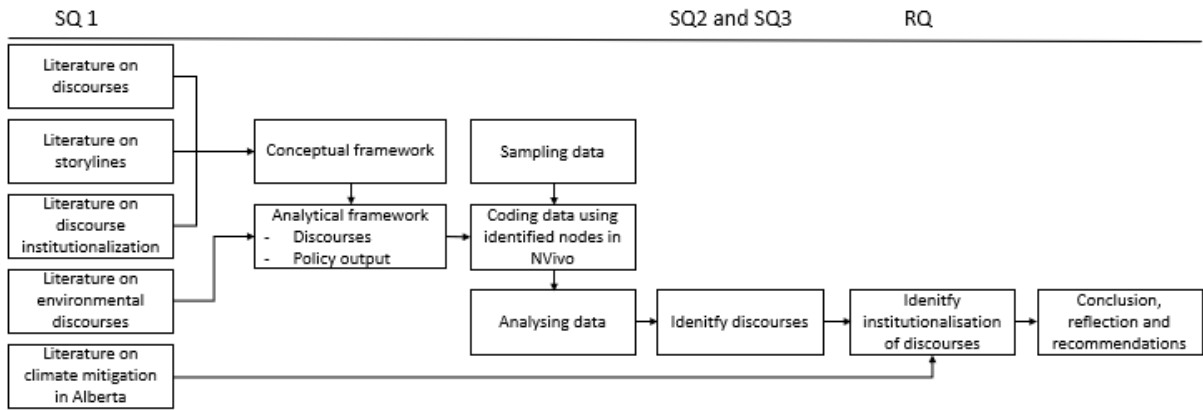


Figure 1: Research framework

2. Theory

2.1 Discourse analysis

2.1.1. Forms of discourse analysis

Discourse analysis can be used to understand why certain definitions and understandings of an environmental problem become institutionalized while others are disregarded (Hajer, 1995; Hajer & Versteegen, 2005). A discourse analysis includes a systemic analysis of collections of texts (Phillips et al., 2004). Different forms of discourse analysis exist, of which critical discourse analysis (CDA) is a frequently used form. CDA focuses on power relations and inequalities issues, and is used for normative research (van Dijk, 1993). However, as understanding power relations is not within the scope of this research, and there is aimed at a more descriptive rather than normative research, CDA will not be used. Hajer (1993; 2002) discusses an argumentative approach to discourse analysis. The argumentative approach “focuses on the level of the discursive interaction and argues that discursive interaction (i.e., language in use) can create new meanings and new identities” (Hajer, 1995, p. 59). These discursive interactions can explain the dominance of certain discourses, which are important in political change (Hajer, 1995). According to argumentative discourse analysis (ADA), politics can be seen as a process where actors try to gain acceptance of their understanding of reality, and thus gain discursive hegemony. Within ADA, there should not be just looked at the meaning of the words and sentences, but also at the points of view that are being criticised (Hajer, 1993).

2.1.2. Discourses and storylines

According to Dryzek (2013), “Discourses construct meanings and relationships, helping define common sense and legitimate knowledge” (p. 9). Actors use language to give meaning to a situation and shape view on reality (Hajer, 1993). Moreover, actors are positioned in a certain role by discursive debates, the effect of which depends on the extent to which an actor takes on this role (Hajer, 1995). Discourses are situated in a specific historic, political and cultural context, where there are discourses that have defined phenomena in the past, which should be taken into consideration (Hajer, 1993; Hajer & Versteegen, 2005). Elements of discourses are coherently combined in storylines (Hajer, 1993). These storylines are “narratives on social reality through which elements from many different domains are combined and that provide actors with a set of symbolic references that suggest a common understanding” (Hajer, 1995, p. 62). Actors use storylines to impose their understandings of the world on others, and criticize competing understandings (Hajer, 1993). The benefit of using storylines is that it enables reducing the discursive complexity of a problem. Furthermore, storylines give unity to the different discursive elements of the situation, and they can cause policy change to occur by providing new understandings (Hajer, 1995). All in all, discourses compete continually with each other to obtain dominance (Spence, 2007).

2.1.3. Institutionalization of a discourse

In order for a discourse to have an impact on the policy output, discourse institutionalization is crucial (Bulkeley, 2000). Discourse institutionalization occurs when a discourse is captured in an institution and the policy process is conducted according to this discourse (Hajer, 1993). When a discourse is

institutionalized, it promotes the reproduction of that discourse (Hajer, 1993). Discourse institutionalization is one of the two conditions that Hajer (1993; 1995) identified in order for discursive hegemony to occur, the other condition being discourse structuration. However, according to Bulkeley (2000), multiple discourses can achieve structuration, while without discourse institutionalization, the impact is ambiguous. For this reason, the analysis of this research will focus on discourse institutionalization. Phillips et al. (2004) identified two factors that influence whether a discourse produces an institution. The first factor is the coherence and structuredness of a discourse. The more coherent and unified a discourse is, the more unified view of reality it presents (Phillips, 2004). The second factor is whether a discourse is supported by another broader discourse, or opposed by a competing discourse. Research has already been done on discourses in the context of climate mitigation, and the institutionalization of them. Here, there will be elaborated on that research and the discourses that were found.

Firstly, both Hajer (1993), who researched the case of acid rain in Great Britain, and Davidson and MacKendrick (2004), who researched the integrated resource management policy in Alberta, analysed two competing discourses: ecological modernization (EM) and traditional pragmatism (TP). EM perceives environmental protection and economic growth as reconcilable, and mutually reinforcing (Davidson & MacKendrick, 2004). According to Hajer (1993), EM is characterised by seeing nature as a resource rather than a sink, and pollution prevention is preferred over a reactive approach. In the case of acid rain in Britain, the ecological modernization discourse did not achieve discursive hegemony (Hajer, 1993). The research by Davidson and MacKendrick (2004) concluded that the government adopted the ecological modernization discourse, without making institutional changes.

Bulkeley (2000) identified two different discourse coalitions in the Australian climate change processes: resource-based discourse coalition and the greenhouse discourse coalition. The storyline that the resource-based discourse coalition communicate is that of scientific uncertainty about climate change. Furthermore, they highlight the need for environmental measures to have a low economic impact. This discourse is relatively similar to that of the traditional pragmatist. The greenhouse discourse coalition promotes the precautionary principle and highlight economic benefits of environmental action (Bulkeley, 2000). Thus, this storyline is relatively similar to that of EM.

Gaither and Gaither (2016) found different narratives that the fossil fuel industry used in the United States to gain support for themselves, and reduce support for climate mitigation strategies as well as promoting uncertainty around climate change. For example, they identified a narrative by the industry trying to negatively influence the image of “the others”, meaning those opposing the industry and/or supporting environmental regulations, picturing them as uneducated. Furthermore, Jaworska (2018) researched reports by oil companies on corporate social responsibility and environmental between 2000 and 2013 and the discourses that were used on climate change. Here, it was found that especially in the recent years, there was a focus on the risks of climate change, framing themselves as a victim instead of a contributor.

Bäckstrand & Lövbrand (2006) discusses three discourses that they argue underpin environmental debates, which are ecological modernism, green governmentality and civic environmentalism. The green governmentality discourse sees climate issues as technical problems (Adelman, 2015). The discourse is associated with the notion of “stewardship of nature and an all-encompassing management of its resources” (Bäckstrand & Lövbrand, 2006, p. 54), as well as top-down global mitigation approaches (Bäckstrand & Lövbrand, 2007). Civic environmentalism on the

other hand is characterised by bottom-up, multi-stakeholder approaches to problem solving (Bäckstrand & Lövbrand, 2006).

What can be seen from these cases in climate mitigation is that multiple discourses have been identified. Thus, it is also expected that in the case of climate mitigation in Alberta, also a combination of discourses will be present. Furthermore, from these cases lessons can be drawn on possible discourses that can be found in the case in Alberta, as will be elaborated on in section 3.2.

2.2 Conceptual framework

In figure 2, the conceptual framework can be seen it which a simplified overview of the process of discourse competition and institutionalization is visualized. Here, two discourses are present, each with their own storylines, actor perceptions and visions of the discourse. Here, discourse 1 has historically dominated the debate and is well institutionalized. Another discourse competes with this discourse to become the dominant discourse and influence the policy output through discourse institutionalization. This process is influenced by the historical, political and cultural context.

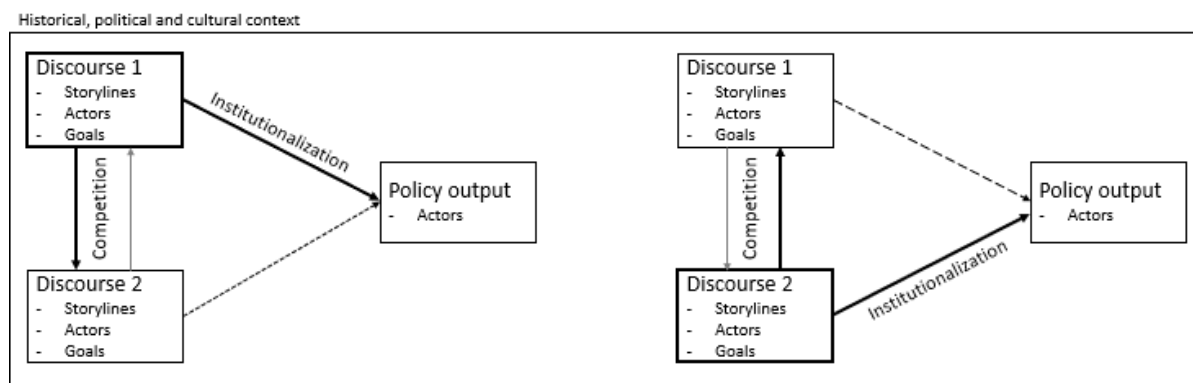


Figure 2: Conceptual framework

3. Methodology

3.1 Research strategy and method

In this research, a qualitative discourse analysis was performed on a case study in climate mitigation in Alberta, Canada. A case study was chosen as a research strategy as this allows for an in-depth view of the research problem. This in-depth view is useful here as there is a focus on elaborate interpretation of the data. Furthermore, qualitative research was chosen over quantitative data as this fit with this in-depth view. The specific case study in Alberta, as is explained in chapter 4, was chosen as it acts as an interesting example of the struggle to implement climate mitigation policies in a fossil fuel dependent society.

Moreover, a discourse analysis was chosen as this can give insights in how meaning is given to certain phenomenon or problems, in this case climate change. As was mentioned before, these discourses, and the storylines that follow from them, have the possibility to cause institutional and political change (Hajer & Versteeg, 2005; Arts & Buizer, 2009). By analysing these discourses and storylines, more insight will be gained to what extent certain discourses are institutionalized and influence the policy output, and how actors try to achieve this.

3.2 Operationalisation and analytical framework

In this research, the two main variables are the discourses (independent variable), and the policy output (dependent variable). It was expected that there are two competing discourses that will be present on climate mitigation in Alberta. These discourses and their storylines are based on the discourses on climate mitigation that were found in other cases, as well as on the characteristics of Alberta as described in section 4.2.

Before the research was conducted, it was expected that two discourses would be found. The first discourse that was expected to occur will be called the fossil fuel discourse. As was mentioned before, Alberta has a very prominent gas and oil industry providing jobs and economic welfare (Alberta, n.d.b; Statista Research Department, 2021). Furthermore, concerns of the economic impact of carbon pricing in Alberta have been expressed (Murphy, 2019). Thus, it was expected that this discourse would be characterized by storylines that emphasize the importance of the economic benefits of the fossil fuel industry for the province. Murphy (2019) also discusses the possibility of displacement of emissions to less regulated jurisdictions. Thus, it is expected that uncertainty around the benefits of climate mitigation policies would be emphasised. Lastly, it was expected that the fossil fuel industry would be framed here as providing benefits to the rest of society such as jobs and economic security, while the federal government, and those supporting climate mitigation policies as those standing in the way of economic development.

The other discourse that was expected to be present is a climate mitigation discourse. This discourse is characterised by emphasizing the risks of climate change and the need to act on it, as mitigation climate change is one of the aims of the GGPPA (Ministry of Environment and Climate Change, 2020). Furthermore, as was also mentioned in the EM discourse, and the storylines of the greenhouse discourse coalitions, it was expected that the precautionary principle will play a central role in this discourse.

In figure 1, the analytical framework can be found in which the variables, indicators and measures are presented. To obtain a full overview of the discourses that are present, the indicators that were used are: which storylines are used, which roles actors are positioned in, and what the goal

of the discourse is. As a starting point, three measures were identified that are expected to form a storyline and are based on the expected discourses above. The first element of the storyline is the expected or perceived effect of climate mitigation policies. As was explained above, a discourse can focus on the possible positive or negative effects. The second measure is related to this, and is whether or not the fossil fuel reserves that are in the ground should be used or kept in the ground. Lastly, a storyline will likely involve their perception of risk of climate change, whether there is a risk and what level of risk is acceptable. However, during the research, more elements were identified that form a storyline.

With regard the positioning of actors in certain roles, actors can be positioned as the ‘bad-guys’ or the ‘good-guys’. In a discourse, a bad-guy can be identified as those that are in the way of reaching the goal of the discourse, while a good-guy can be identified as those supporting, and working towards, the goal of that discourse. The last indicator of a discourse is the goal of the discourse. In this case, this was expected to be related to the level of limitation to emit greenhouse gas emissions.

As was said before, for a discourse to have an impact on the policy output, a discourse needs to be institutionalized. It can be said that institutionalization is the condition for the discourse to influence the policy output. When a discourse is institutionalized, its “theoretical concepts (...) are translated into concrete policies” (Hajer, 1995, p. 61). This was measured through identifying which storylines are present in the policy output, how the actors are framed, and what the goal is of the policy.

Table 1: Analytical framework

Variables	Indicators	Measures
Discourse	Storylines	Climate mitigation policies
		Fossil fuels and energy demand
		Risk and severity of climate change
	Role positioning of actors	Bad-guys: those that work against the achievement of the goal of the discourse
		Good-guys: those that support the achievement of the goal of the discourse
	Goals	Level of limitation to emit GHG emissions
Policy output	Climate mitigation policies	Policies with an aim to reduce GHG emissions in Alberta
Institutionalization	Concepts translated into policies	Storylines as identified are present in the policy output
		Positioning of actors as identified present in the policy output
		Goals of a particular discourse present in the policy output

3.3 Data collection and sampling

Different sources were used to analyse the discourses and policy outputs in Alberta in relation to climate change and climate mitigation policies. These sources include media, policy documents and industry reports.

3.3.1. Media articles

The first type of source that was used are media articles. This research focused on two national digital news platforms and two local news platforms that are based in Alberta. By focusing on both national and local newspapers, it was expected that a broad overview of discussions would be present. For the national news platforms, there is chosen to look at the Canadian Broadcasting Corporation (CBC) and CTV news, which are one of the largest digital media platforms by circulation in Canada (Agility PR Solutions, 2020; All you can read, n.d.). For local newspapers, there is chosen for the Calgary Herald and The Edmonton Journal, as these are the largest daily newspaper in Alberta, and based in Calgary and Edmonton (Newspapers Canada, 2016). In figure 3, an overview of the data sampling can be seen. For Calgary Herald and Edmonton Journal, Nexis Uni was used, as those articles were not freely accessible online. CBC and CTV News are not present in Nexis Uni, and thus the news site was used. Here, there could not specifically be searched for a specific time, so that step is skipped, still there was made sure that there is an equal distribution of articles across time. To search for the articles, the key word “Alberta” was also used. Then different key words were added as can be seen in Figure 3. These key words were chosen as it was expected this would lead to a broad overview of the discourses that are present in Alberta. In total 150 articles were collected, approximately equally divided over the four different platforms and the timeframe. An overview of the collected articles can be found in Appendix A.

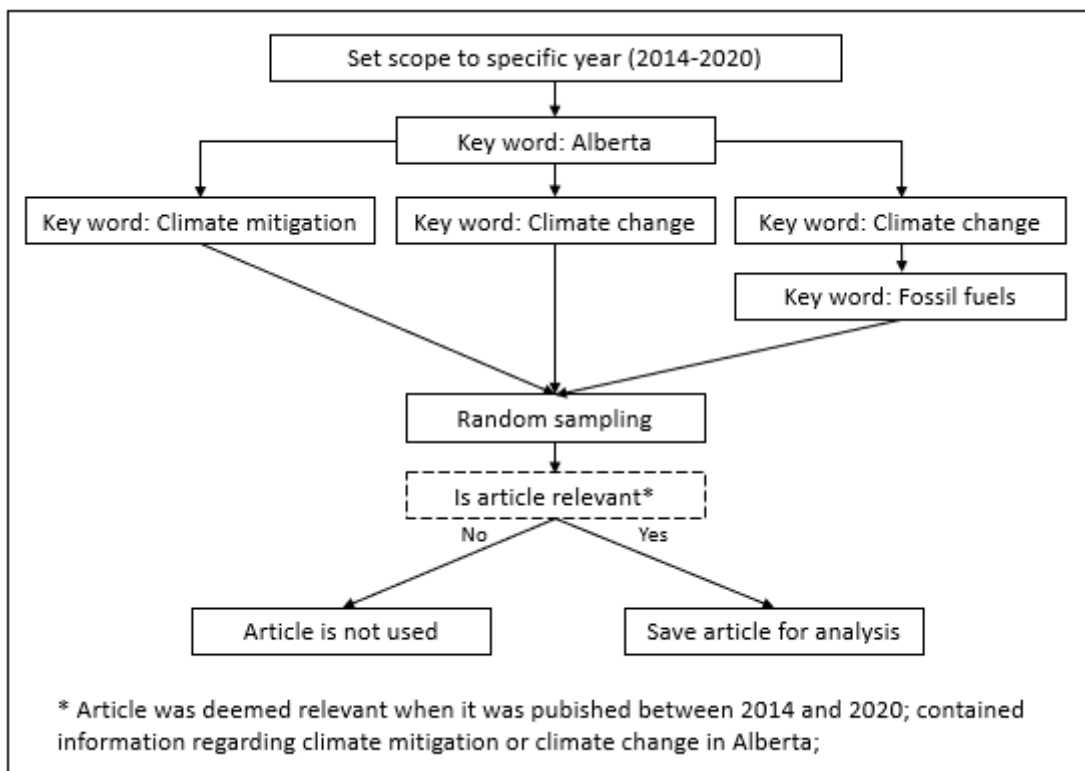


Figure 3: Data sampling of media articles

3.3.2. Industry reports

As a next source, there was looked at reports from the industry. Here, the focus was on the oil and gas industry, as this is the largest industry in Alberta, as is also mentioned in section 4.2. The companies of which the reports were analysed were chosen based on their presence in Alberta and their revenue,

as it was expected that the companies with the highest revenue will have the highest potential to influence policy because of their size and economic power. These companies include Enbridge Inc., Suncor Energy Inc. and Imperial Oil Ltd (Sönnichsen, 2020). It is important to note that these companies are not just operating in Alberta, but also other parts in North America and Europe.

To gather the reports, the websites of the companies were used, which all contained a page with current and archived reports. Here, the reports that fit in the time frame 2014-2020 and concerned climate change or climate mitigation were selected. This included corporate social responsibility reports, environmental reports, and sustainability reports. All in all, for Enbridge Inc., corporate sustainability reports were found for the years 2014 to 2019, as well as a report on resilient energy infrastructure from 2019. For Imperial Oil, citizenship summary reports were found for the years 2014 and 2015, which also includes a section on the environment. For 2016, only the highlights of the corporate citizenship were found. Corporate sustainability reports were found for the years 2017, 2018-2019, and 2019-2020. For Suncor Energy, sustainability reports and climate risks and resilience reports were found for the years 2017 to 2020. For 2014 to 2016, only sustainability reports were found. These reports together will be referred to as industry reports in the results. An overview of the selected reports can be found in Appendix B.

3.3.3. Policy documents

Next, there was looked at policy documents. An overview of the sampling of policy documents can be found in figure 4, and contained of three steps. First, a website of the Alberta government was used where publications can be found (Alberta government, n.d.). Here, the aim was to find the relevant documents that have been made in the set time frame (2014-2020), which include legislation and implementation plans. Relevant policy documents are those that are related to climate mitigation, as was explained in the analytical framework. Search terms that were used are “climate mitigation”, “climate change”, “fossil fuel”, and “climate emissions”. In total, ten documents were selected through this website. Here, there was focused on the main documents of an action plan or act, rather than e.g. summary documents. Then, another website of the government of Alberta (Alberta, n.d.c.), which contained an overview of climate legislation. These documents were also checked whether they were not selected yet during the previous sampling method, and if they were relevant. Lastly, when it appeared from the other types of data such as the media that not all relevant policies have been found, there was specifically searched for the relevant policy documents. For example, the climate leadership act was not found on beforementioned websites but was mentioned in other sources that were analysed. In total 13 policy documents were selected for analysis, which can be seen in Appendix C.

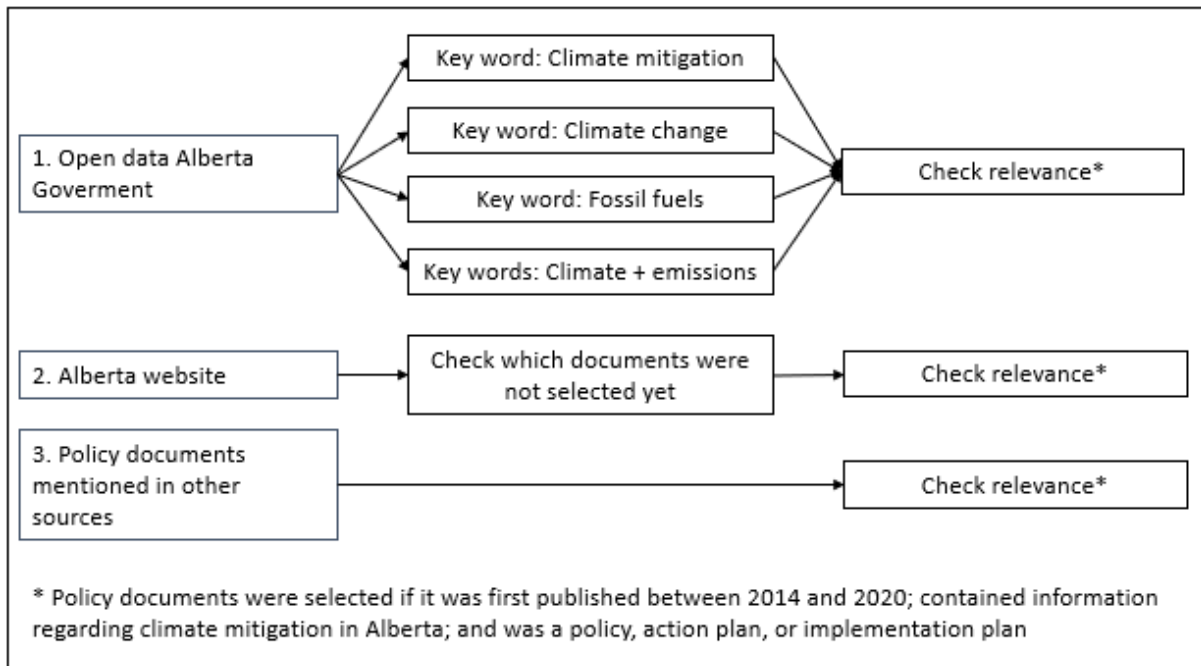


Figure 4: Overview of sampling method for policy documents

3.4 Processing and analysing data

3.4.1. Coding strategy

Once relevant documents were selected, they were stored on a computer in such a way that they could be coded and analysed. The coding was done through the software programme NVivo, in which data can be coded using nodes. There was started with nodes that correspond to the measures as identified in the analytical framework. However, when new information was provided in the documents that did not fit in one of the existing nodes, a new node was created. First, the news articles were coded, after which the industry reports and then the policy documents. After the articles of the first news website was coded, a considerable number of nodes were added and some restructuring of the categories took place, to fit the data better. To make sure that the already coded articles were still fully coded according to the nodes, the coded articles were scanned through again. Additional nodes include nodes on the industry, pipeline construction and economic concerns. With regards to the industry reports, not all chapters were relevant for this research, as they did not contain any information on climate mitigation or climate change. For example, chapters on personal safety and inclusivity of employees were not coded. When there was doubt whether a chapter would contain relevant information, it was still fully read through.

3.4.2. Analysing data

Once the data was coded in the nodes, they were analysed and separate storylines, actors and goals were identified, which make up a discourse. Different arguments were described, in different categories that correspond to the created nodes. To identify the discourses, there was looked at which arguments are used in combination or are similar in nature. Once the discourses were identified, the goals of the discourses were determined by looking at the overarching reasoning and argumentation. Furthermore, there was looked at whether differences in discourses over time were visible. The election cycles as presented in table 2 were used as initial time periods for this.

To determine the institutionalisation of the discourses, there was first looked at the competition between the different discourses that were identified, after which there was looked at whether the storylines, role positioning of actors and goals that were identified are present in the policy output, as was said in the analytical framework.

4. Case study

4.1 Alberta characteristics

Alberta is located in the southwest of Canada at the border with the United States. Characterising for Alberta are the oil sands. Under 142,200 square kilometre of land lie the oil sands in the areas Athabasca, Cold Lake and Peace River (Alberta, n.d.b). The mining and oil and gas extraction industry provided 140,300 people of jobs in 2017, which is about 6.1 percent of the total employment (Alberta, n.d.b; Alberta government, 2018). Furthermore, this industry accounted for sixteen percent to the gross domestic product of Alberta in 2019, making it the largest industry in Alberta (Statista Research Department, 2021). However, according to Dalby (2019), the oil sands contribute only a few percent to the national economy, and Alberta receives little royalties in comparison to other areas that produce oil.

From 1971 to 2015, the Progressive Conservative Association of Alberta has formed the majority government in Alberta, after which the Alberta New Democratic Party (NDP) formed the majority government for four years till 2019 (Elections Alberta, n.d.). In the elections in 2019, the United Conservative Party (UCP) won the majority of the seats, causing another shift in government (Elections Alberta, n.d.). During the elections of 2019, the carbon tax that was implemented by the NDP government was a prominent issue that divided the NDP and the UCP (Mertz, 2019). The UCP promised to repeal the carbon tax and replace it with the Technology Innovation and Emissions Reduction regulation, as well as to challenge the constitutionality of the federal carbon tax in court (Global News, 2019).

4.2 Climate mitigation policies in Alberta

For large emitters, Alberta introduced an Output-Based Pricing System (OBPS) in 2007 under the Specified Gas Emitter Regulation, being the first province to do so (Government of Canada, n.d.). Then, in 2015, the provincial government introduced the climate leadership plan to “reduce carbon emissions and diversify the economy” (Energy, 2018a). This was followed by the climate leadership act in 2016, which included a carbon levy. In 2017 the provincial government introduced the Climate Change Innovation and Technology Framework and Alberta Research and Innovation Action Plan 2017-2020, that both aim to diversify the economy, create jobs and mitigate climate change (Government of Alberta, 2017a; 2017b). In 2018, the Specified Gas Emitter Regulation was replaced by the Carbon Competitiveness Incentive Regulation, which also included the OBPS. The Carbon Competitiveness Incentive Regulation was replaced by the Technology Innovation and Emission Reduction regulation on January 1, 2020 (IEA, 2020).

In 2019, the provincial government repealed the climate leadership act including the carbon levy. However, the federal government introduced the Greenhouse Gas Pollution Pricing Act (GGPPA) in 2018, which contains a backstop consisting of a fuel charge on different types of fuels and combustible waste as well as a federal output-based pricing system (OBPS) for large industrial emitters (Choudhry, 2019). This backstop will be imposed on provinces that do not meet the benchmark set by the federal government. Because of the withdrawal of the carbon levy in Alberta, the province did not meet the benchmark, and thus the federal government imposed the federal fuel charge on Alberta, which was implemented on January 1, 2020 (Government of Canada, n.d.; Alberta, n.d.a).

Alberta, as well as the provinces Saskatchewan and Ontario, challenged the constitutionality of the GGPPA and went to their provincial courts. While the courts in Saskatchewan and Ontario judged

that the GGPPA is constitutional, the court in Alberta judged against the constitutionality of the GGPPA (Rabson, 2020). In September of 2020, the Supreme Court of Canada heard the arguments of the parties involved (Imri, 2021), and on March 25, 2021, the court judged that the GGPPA is constitutional (Supreme Court of Canada, 2021). However, as the judgement took place in 2021, it is out of the timeframe and not visible in the data. In table 2, an overview of the relevant events can be found.

The government has often collaborated with the fossil fuel industry when designing climate mitigation policies (Pachon & Weber, 2016). Furthermore, according to Pachon and Weber (2016), “this industry has a major role in the Alberta economy and the government has been historically supportive of it” (p. 2).

Table 2: Timeline important events

Event	Date
New provincial government Progressive Conservative Association of Alberta ¹	1971
Implementation Output Based Pricing System Alberta ²	2007
New provincial government by New Democratic Party (R. Notley) ¹	2015, May 24
Climate leadership plan ³	2015, November 22
Climate leadership act (including carbon levy) ⁴	2016, May 24 – 2019, May 30
Climate Change Innovation and Technology Framework ⁵	2017, December 5
Alberta Research and Innovation Action Plan 2017-2020 ⁶	2017, January 1 – 2020, January 1
Carbon competitiveness incentive regulation ⁷	2018, January 1 – 2020, January 1
Introduction Greenhouse Gas Pollution Pricing Act ⁸	2018, June 21
New provincial government by United Conservative Party (J. Kenney) ¹	2019, April 30
Carbon tax repeal ²	2019, May 30
Federal government announced imposing federal carbon tax ²	2019, June 13
Federal carbon tax implemented ²	2020, January 1
Technology innovation and emissions reduction regulation ⁹	2020, January 1

¹Elections Alberta (n.d.); ²Government of Canada (n.d.); ³Energy, 2018; ⁴Climate Leadership Act (2016); ⁵Government of Alberta (2017b); ⁶Government of Alberta (2017a); ⁷Carbon Competitiveness Incentive Regulation (2017); ⁸ Choudhry (2019); ⁹ Technology Innovation and Emissions Reduction Regulation (2019).

5. Results

Here, first the discourses will be explained that were found during the analysis, after which an overview is given of the most important elements of each discourse. Hereafter, there will be elaborated on the institutionalisation of the discourses.

5.1 Discourses

There are three discourses that are found in the case study: a business-as-usual discourse, green growth discourse and an environmental discourse. The business-as-usual discourse emphasizes the importance of economic growth, which should not be limited, and the role of the fossil fuel industry for the economy. The environmental discourse is a discourse that emphasizes the threat of climate change and call for more climate action. Lastly, the green growth discourse is a discourse that emphasizes the need and possibility to grow economically while still protecting the environment, and the opportunities from innovation and new technologies. Next, there will be further elaborated on these discourses, what storylines were used, how different actors were perceived and what the goal of the discourse is. The storylines will be explained according to the measures in the analytical framework, namely: 'climate change and climate action' and 'fossil fuel use and industry'.

5.2 Business-as-usual discourse

5.2.1. Storylines

Climate change and climate action

With regard to the view on climate change and the role of carbon on this, there is not one clear storyline visible. While some acknowledge that greenhouse gas emissions have caused climate change, there is also an argument is being made that climate change occurs naturally, and thus is not caused by humans or carbon (Ward, 2019). However, this discourse argues that the contribution of the oil sands and Canada on the global greenhouse gas emissions is small (Derworiz, 2014; Weber, 2014; Calgary Herald, 2020), as well as that what Alberta does has a “negligible effect on emissions anyway” (Gerein, 2019). There has even been a question of whether CO₂ is pollutive as it is “actually plant food”, however, this has also been refuted (CBC News, 2018d). Both in 2016 and 2019, Alberta suffered from big wildfires in this province (Petoukhov et al., 2018; Short, 2019). Within this discourse, the link between anthropogenic climate change and extreme weather events is questioned (CBC News, 2018d; Derworiz, 2019), while not completely disregarding the idea. It is argued that such weather events occur naturally in Alberta, mentioning that a big wildfire was already overdue (Derworiz, 2019).

This discourse is critical on climate action, and emphasizes possible negative economic impacts of climate mitigation strategies. For example, there is criticism that the climate change plan of the NDP government has negative effects on the provincial economy, and Alberta in general (Wood, 2017b; Rabson, 2017). Related to this, it the view that the climate goals of the federal government are not fair as they put most burden on Alberta and other carbon-based economies (Calgary Herald, 2020; Klassen, 2015), and hurt the energy industry in Alberta (Villani, 2019). Next to this, concerns regarding job safety have been expressed, suggesting that climate action can lead to thousands of job losses in the oil and gas industry (The Canadian Press, 2017), while new jobs cannot be created as fast in another sector (Zabjek, 2017). Furthermore, this discourse also opposes the carbon tax, as it is argued that the carbon

tax did not reduce emissions but led to high cost for Albertan families (Bennett, 2019), as well as that the costs for households are not fully covered by the rebates (Gibson, 2016; Bakx, 2016). Albertan premier Kenney from the UCP expressed about the carbon tax: “*we think it’s all economic pain and no measurable environmental gain*” (Graney & French, 2019). In addition, the NDP is being accused of lying about the carbon tax being revenue neutral, which is not true according to some (Henton, 2015b). Furthermore, it is argued that the carbon tax could impact investor confidence (Gibson, 2016), even though there are several investors that have pulled away from the industry because of the lack of climate action (e.g., Rabson, 2019a; Reuters, 2020; The Canadian Press, 2015b). Another argument that is used against the carbon tax, is that the carbon tax is put forward as a pollution tax, but doubts are expressed whether carbon is pollution, as was explained previously (CBC News, 2018d). Lastly, there has been opposition against the federal carbon tax, because it is thought to be unconstitutional (Graney & French, 2019; Joannou, 2020b). This argument is used in combination with previous mentioned arguments.

Fossil fuel use and industry

It is emphasized that the economy in Alberta and Canada has benefitted significantly from the resource sector and the oil and gas industry (e.g., The Canadian Press, 2015a; Wood, 2017b; Calgary Herald, 2018b; Calgary Herald, 2019a; Staples, 2020), as it provides jobs and generates tax revenue, through which other services can be provided to Albertans (Calgary Herald, 2019b; Rabson, 2018b). It is further emphasized that the oil and gas industry account for thousands of jobs in Alberta (e.g. Bennett, 2016b; Puxley, 2017; Maloney, 2018). This is also mentioned in the different industry reports by Enbridge Inc., Imperial Oil Ltd. and Suncor Energy Inc. throughout the different years, as well as in several policy documents (e.g. Government of Canada, 2015; 2017a). In addition, this discourse emphasizes the persistent (global) demand and need for fossil fuels in the future (e.g. Villani, 2020; Thompson, 2017a; Calgary, Herald 2018a; CTVNews.ca., 2014). The argument is used that the oil peak will occur twenty to thirty years from now (Derworiz, 2014; Calgary Herald, 2018a), so if Canada would transition of fossil fuels, they would transfer jobs and wealth to other countries, while not benefitting themselves (Calgary Herald, 2018a). Furthermore, if oil is needed, it can better come from a place where it is sustainably produced, like Alberta, then that it is imported from somewhere else (Fletcher, 2017). This argument of the ongoing demand for oil is also mentioned in the industry reports. For example, Suncor Energy Inc. emphasizes the importance of energy for today’s society (2015; 2016; 2017a; 2018b; 2019b; 2020b), and the growing demand of it (2018b; 2019b). Furthermore, also Imperial oil Ltd. (n.d.d.) argues that if Canada does not supply the growing demand of energy, other jurisdictions that are less sustainable will. Lastly, it is argued that renewable energy cannot replace fossil fuels, as illustrated by the following quote: “*despite hundreds of billions in investment in solar and wind around the world, there’s not a city on earth that can run on solar and wind alone*” (Staples, 2020).

This emphasis on not limiting the fossil fuel production also translates to the view on pipeline construction. Here, it is argued that the pipelines are needed to create more opportunities to take the oil to the market (e.g. Bakx, 2015; CBC News, 2018c; Villani, 2019). According to this argument, market access is critical for the industry and the economy, and more markets other than the United States are needed to get good value for the resources of Canada (Bennett, 2016b; Dehaas, 2018). Thus, pipelines are needed for the economy of Alberta and Canada, as well as job opportunities for the many workers that depend on the oil and gas industry (e.g. CTV 2016 6; CBC Radio, 2019). Moreover, the argument is used that investors might not want to invest in big projects unless the export opportunities of oil get

improved (French, 2019b). Also a comment was made on those that oppose the building of new pipelines, as they were called “*being extremely foolish*” (Bennett, 2018). A support for new pipelines has also come from the industry. Suncor Energy Inc. has expressed their support for new pipelines because of the importance of market access and as it is the safest and most efficient way to transport oil (2019b; 2018b; 2018a; 2017a). Furthermore, also Enbridge Inc. states that pipelines are the safest and efficient way for transportation (n.d.b). Next, the need for new markets for the Albertan economy is emphasized in multiple policy documents (Government of Alberta, 2015; Energy, 2018). Other transport options have been discussed as well in some news articles, such as transport by rail, however this received significantly less attention than the construction and use of pipelines, and thus seem to carry less symbolic power.

5.2.2. Actors

This section will look how different actors are perceived, as was explained in the analytical framework. This discourse sees the industry as the good-guys, as they have said to been working hard and making large investment to reduce their greenhouse gas emissions (Zabjek, 2017; Varcoe, 2019; Staples, 2019; Reuters, 2020), and they should get credit for that (Zabjek, 2017). Moreover, the oilsands contribution to climate change and the amount of CO₂ emissions is said to be very small (Weber, 2014; CTV Calgary Staff, 2014), as was also mentioned in section 5.2.1. As was mentioned before, the UCP even implement a “war room” to challenge misinformation that is spread about the oil and gas industry in Alberta as it is “*the most environmentally responsible oil and gas industry in the world*” (CBC Radio, 2019). Last, the industry is said to create economic benefits (Enbridge Inc., 2015), as they generate jobs and tax revenue (e.g. Calgary Herald, 2019b; Puxley, 2017; La Rose, 2016), and to “*walk away from it is negligent*” (Southwick, 2017). Also the industry themselves emphasize that they have reduced emission intensity over time. Next to the industry, this discourse focusses on the wellbeing of Albertan families and workers. This is apparent from the focus on economic impacts for households of climate mitigation policies, or the concern for job losses in the industry.

Those that are perceived as bad guys are environmentalists. Climate protesters were suggested to be uninformed and uneducated (CBC Radio, 2019). Furthermore, it was suggested that those who oppose pipelines have unrealistic ideas: “*Here in Alberta, we ride horses -- not unicorns -- and I invite pipeline opponents to saddle up on something that is real*” (Bennett, 2018). In addition, as was mentioned before, there has been critique on the NDP government and their climate action plan.

5.2.3. Goal

When looking at the storylines and how different actors are perceived, the goal of this discourse seems to be focused on the economy and keeping costs of climate action as low as possible. Furthermore, the industry should be able to grow, and climate action should not lead to higher costs for Albertan households.

5.3 Environmental discourse

5.3.1 Storylines

Climate change and climate action

With regard to the view on climate change, this discourse emphasizes the threat of climate change (e.g., Urquhart, 2018; Calgary Herald, 2019a; Suncor Energy Inc., 2019b), or have been calling out a climate crisis (CBC News 2017; Calgary Herald, 2018b; Krugel 2019). This idea that there is a climate crisis is refuted by others, outside of this discourse (French, 2019a). Related to this is that some cities in Alberta have declared a climate emergency, which is also not something that is done by every city (CBC radio, 2019). Here, the scientific consensus on climate change is often emphasized (e.g. CBC News, 2017; Pittis, 2020; Calgary Herald, 2018b; Calgary Herald, 2019a). This emphasis on scientific evidence is also present in the Climate Leadership Discussion Document (Government of Alberta, 2015). Furthermore, in several policy documents there has been discussed that Alberta should be climate leader (Government of Alberta, 2015; 2017a; 2017b; Energy, 2018).

With regard to emissions, it is emphasized that Alberta is a large contributor to the total greenhouse gas emissions in Canada (CBC News, 2015; Calgary Herald, 2019a; Cheadle, 2015a), and that the industry contributes to a large share of the emissions (Rabson, 2019b). Furthermore, this argument includes the need to reduce greenhouse gas emissions largely (Osman, 2016; Calgary Herald, 2018b; Vipond & Perrotta, 2015; Chisholm, 2015). When looking at the industry reports, it can be seen that it is acknowledged by all three companies throughout the full timeframe that climate change is occurring and that there is a need to reduce greenhouse gas emissions. Here, also the scientific consensus is emphasized by Imperial Oil Ltd (n.d.a), and Suncor Energy Inc. (2015; 2018b; 2019b). Also in many policy documents is a goal to reduce greenhouse gas emissions mentioned (e.g. Government of Alberta, 2015; 2017a; 2017b; 2018).

Related to the discussions on climate change and greenhouse gas emissions is the link between climate change and emissions to extreme weather events such as wildfires, droughts, heatwaves, floods and/or hurricanes. This discourse clearly links these two together (e.g., Wood, 2017b; Derworiz, 2016; Gerein, 2019), and put emphasis on the scientific evidence of linking the wildfires to climate change (e.g., Bell & Symington, 2016; Cheadle, 2016; Gage, 2019), which is illustrated by the following quote: *“Climate scientists are saying this around the world and every serious international publication has linked the fires with climate change”* (Derworiz, 2014). This causal link between greenhouse gas emission of the industry and extreme weather events is not explicitly mentioned in the industry reports. However, adaptation measures to extreme weather events, such as droughts, are mentioned by Suncor Energy Inc. (2020a; 2019a; 2018a; 2017a).

Next there will be looked at the views on climate mitigation. First of all, this discourse emphasizes that Alberta should be doing more when it comes to climate action, or that the current climate strategies in place are not effective enough (e.g. Wood, 2015; Kirkup, 2016; Fletcher, 2017; CBC News, 2018a; Thomas, Smith & Babych, 2019). For example, specific criticisms have been made towards the lack of climate action of the Progressive Conservative Association of Alberta (Henton, 2015a), as well as on the UCP (Thomas, Smith & Babych, 2019). They also have said to fail in diversifying the economy and have a climate action based on science (Swann, 2019). About the UCP was said the following: *“We no longer have a government that is interested in putting forward credible climate change policy or credible monitoring and science in the oilsands”* (The Canadian Press, 2019).

Furthermore, it was suggested that the UCP government has a pattern of not acting on climate change (The Canadian Press, 2019), and that the level of climate action has even been declining, instead of making progress (Calgary Herald, 2019a). However, also the NDP government has received criticism for not doing enough to combat climate change (e.g., Wood, 2015; Kirkup, 2016; Fletcher, 2017; CBC News 2018a).

Furthermore, the alleged influence of the oil industry on the provincial government is severely criticised: *“We had democracy in Alberta until we discovered oil”* (Thompson, 2017b). Here, all governments are seen as equally guilty for not acting on climate change because of the influence of the oil industry (Thompson, 2017b). Lastly, the UCP government has received criticism on their so called “war room”. This war room *“meant to counter misconceptions about the province’s energy industry and government”* (French, 2019b). This is criticised as it is said to be *“against both climate science and free speech”* (Swann, 2019), and silences voices that are just being part of discussion on climate change and the use of fossil fuels (French, 2019b).

This discourse is also clearly in favour of a carbon tax, as it is seen as a cost-effective and efficient way to lower greenhouse gas emissions (e.g. Calgary Herald, 2014a; Cheadle, 2015a; Enbridge Inc., n.d.b), as is also mentioned in several policy documents (Government of Alberta, 2015; Energy, 2018). According to this argument, the carbon tax gives an incentive to lower emissions, and can even save people money by doing so. It is said that the tax *“won’t hit most Albertans hard”* (Sinnema, 2015b). Furthermore, it is said that the money generated through the carbon tax will be rebated or reinvested, for example in new green energy projects (Derworiz, 2015; Thompson, 2016; Gerein, 2019). Consequently, the carbon tax repeal by the UCP government was met with criticism, calling it an *“abdication of responsibility”* (Bennett, 2019). Furthermore, concerns have been expressed on the future of projects that are funded through the money generated by the carbon tax, if the tax gets cancelled (Gerein, 2019; Graney & French, 2019). Support for the carbon tax has been mentioned by all three companies that were analysed. However for Imperial oil Ltd., support for the carbon tax was only mentioned in the reports of 2018 and 2019-2020.

Fossil fuel use and industry

The environmental discourse emphasizes that a fast transition away from fossil fuels is necessary. It is argued that there should be prepared for a future where fossil fuels might not bring the same prosperity anymore (Calgary Herald, 2019a). The vision is that Alberta should be a leader in the transition and move away from fossil fuels as fast as possible (e.g., Calgary Herald, 2018b; Calgary Herald, 2019c; Cheadle, 2016; Thompson, 2017b). Furthermore, it is argued that some of the fossil fuels ought to stay in ground, in order for the climate targets to be met (e.g. Derworiz, 2016; Bell & Symington, 2016; Cheadle, 2015b; Bickis, 2017a), and there is called for the end of the fossil fuel era (Derworiz 2016). Related to this is the need to diversify the economy beyond fossil fuels (e.g. CBC News, 2018b; Swann, 2019; Joannou, 2020a). This is illustrated by the following quote: *“Alberta has too many eggs in one economic basket”* (Weber, 2019). An argument that is being used is that because of significant drop in the price for oil, there is a need to invest in other sectors, rather than in the *“declining oil and gas industry”* (Tucker, 2020). Furthermore, the economic benefits of transitioning to a more low-carbon future and an increase in renewable and clean energy is also emphasized. Here, it is stated that this transition leads to the creation of more jobs (Bellefontaine, 2015; Calgary Herald, 2016; Byrne, 2015; Villani, 2020). For example, it is mentioned that there are already more direct jobs in the clean energy sector than in the oilsands: *“Investments in clean energy yield on average three*

times as many jobs compared to investments in oil and gas" (Calgary Herald, 2016). Furthermore, it is stated that those that work in fossil fuel industry currently, should be part of the transition to a low-carbon industry (Cheadle, 2015b; Franklin, 2016) and should be working in the renewable energy sector in the near future (Jones & Dirks, 2019).

The need to decline the amount of fossil fuels, is also visible on the view on pipelines of this discourse. It is argued that no new pipelines should be permitted. The argument is made that pipelines are not needed for economic success of Canada (Varcoe, 2016), thereby going against the argument of the business-as-usual discourse. Furthermore, there are also concerns about risks for environmental safety due to e.g., leakage or oils spills (CTVNews.ca., 2014; CTVNews.ca Staff, 2015; Bickis, 2017a; Joannou, 2020a). Other jurisdictions where the pipelines will go through have said to be concerned that they will only get the risks while profit from the benefits (Keller, 2014). This was commented on by a supporter of pipelines, saying that they will get economic benefits due to taxes and have a port facility located (Keller, 2014). Furthermore, it is also said that pipelines cannot be built for Canada to meet their climate targets and mitigate climate change (Rabson, 2018a; Bell & Symington, 2016). This is also illustrated by the following quote: *"We can't address climate change by building more of the past (...). The idea that pipelines are answers to climate change is absurd. You don't buy more cigarettes to quit smoking"* (French, 2018).

5.3.2. Actors

With regards to the actors that are perceived as bad-guys, the industry has been called a *"dirty and polluting industry"* (Krugel, 2015) that is *"shortsighted and unnecessary"* (Oxford, 2016). Furthermore, it is stated that the industry should not grow anymore (Bennett, 2018; Krugel, 2015), and there has been called for a boycott of fossil fuel industry sponsored event (Weber, 2014). Furthermore, there are several instances who have stopped investing in the fossil fuel industry (Rabson, 2019a; Reuters, 2020; The Canadian Press, 2015b). For example, the Norges Bank Investment Management stopped investments in several Calgary-based companies such as Suncor Energy Inc. and Imperial Oil Ltd. due to their level on greenhouse gas emissions (Reuters, 2020). But also the United Church of Canada has stopped investments in fossil fuels, because of their *"Christian duty to care for the earth"* (The Canadian Press, 2015b).

Furthermore, accusations have been made of others being climate deniers. For example, the UCP government have been accused by Greenpeace of being climate deniers after cancelling certain policies and programs such as the carbon tax and installing a *"war room"* against misinformation about the industry (The Canadian Press, 2019). Moreover, the conservatives have been called to *"stop pretending climate change isn't real"* (Rabson, 2017).

Lastly, as was said before, both the UCP and NDP government was criticised for not implementing (enough) climate action plans, with most criticisms going to the UCP government. The UCP is suggested to lack real leadership and responsibility (Thomas, Smith & Babych, 2019; Bennett, 2019).

Those that are perceived as good here are environmentalists and those in favour of more climate action. However, there has not been put a lot of emphasis on those that are seen as the good guys.

5.3.3. Goal

When looking at the storylines and perception of actors in this discourse, there is a focus on the issue of climate change and the need to reduce greenhouse gas emissions. Furthermore, there is a focus on the role of Alberta and its industry in causing climate change. All in all, the goal of this discourse is to increase the amount of climate action to reduce greenhouse gas emissions.

5.4 Green growth discourse

5.4.1. Storylines

This discourse is the least straightforward of the three discourses, and contains elements of the two discourses previously discussed.

Climate change and climate action

Within this discourse, it is believed that human-made climate change is occurring, and that the industry is a large contributor to the amount of greenhouse gas emissions. The industry acknowledges in their industry reports throughout the different years that they contribute to climate change due to their emissions, and aim to lower them. This discourse acknowledges that climate action is necessary. Just as in the environmental discourse, there has been criticisms towards conservative governments for not having sufficient climate mitigation policies or plans in place. This is said to not only hurt the environment, but also the industry and economy (Henton, 2015a). Climate action is said not just to be needed to reduce greenhouse gas emissions, but also to attract investors and create more jobs (Gibson, 2016; Varcoe, 2020). Furthermore, climate action is also said to be demanded by investors (Bickis, 2017b).

Moreover, it is argued that the climate plan by the NDP government is effective and supports the climate plan (e.g., Varcoe, 2016; Bennett, 2016a; Sinnema, 2015a), or parts of it (Henton, 2015b). There are also appraisals for the climate leadership plan specifically. It is stated that it is one of the strongest climate strategies in North America (Energy, 2018; CH 2019 6), saying it is effective in reducing greenhouse gas emissions, while also being good for the economy (Cairns, 2017). This has also been suggested by the industry. Suncor Energy Inc. (2016) stated that the climate strategies allow the industry to grow. Lastly, Alberta has also been called a climate leader because of their action plans, in the time of the UCP government (Derworiz, 2015; Urquhart, 2018). Important to note is that these positive remarks are all on the climate action plans from the NDP government, and thus not from Kenney's UCP government, while both governments also receive criticisms. Also in several industry reports positive remarks have been made on the climate action by government (Enbridge Inc., 2017; Suncor Energy Inc., 2017a; 2020a).

In addition, just as the environmental discourse, this discourse is in favour of a carbon tax. It is said that by implementing a carbon pricing system, it will allow for big projects to move ahead, such as new pipelines to transport oil (Gibson, 2016; Thompson, 2016; Graney & French, 2019). This is shown by the following quote: "*an effective climate strategy is critical for the approval of major natural resources projects under federal jurisdiction*" (CBC News, 2018b). Furthermore, a carbon tax is used to gain approval for new pipelines. This is illustrated by the following quote "*Notley is sending a message to Ottawa, telling Trudeau that the only way Alberta will accept a higher carbon tax is if the federal government starts approving more energy pipelines to get more oil flowing out of Alberta and more money flowing back in*" (Thompson, 2016). Furthermore, a carbon tax is said to encourage innovation that reduces greenhouse gas emissions (Cheadle, 2015a).

Next, there are also arguments being made that economic growth and climate action are dependent on each other (e.g. CBC News, 2018b; Puxley, 2017), as “*you can’t do one without the other*” (CBC News, 2018b). It is argued that both need to occur at the same time, instead of choosing one over the other (e.g. Gorman, 2016; Bickis, 2017a; Gibson, 2016; Thomas, Smith & Babych, 2019), although it is recognized by some that it is a challenge (Derworiz, 2015). The argument that economic growth and climate action are dependent on each other is also made (Suncor Energy Inc., 2016; 2018a; 2020a). In addition, also decoupling economic growth and greenhouse gas emissions is discussed by Suncor Energy Inc. (2017a; 2018a; 2019a; 2020a). Furthermore, all three companies emphasize the challenge of providing energy while reducing emissions.

Fossil fuel use and industry

Just as the business-as-usual discourse, this discourse also acknowledges that the Albertan economy has benefitted significantly from the resource sector and oil and gas industry (e.g., The Canadian Press, 2015a; Wood, 2017b; Calgary Herald, 2018b; Calgary Herald, 2019a; Staples, 2020). However, this discourse argues that a slow and responsible transition from fossil fuels is necessary, with emphasis that the oilsands cannot be shut down tomorrow (Wood, 2017a; Puxley, 2017; Ward, 2019; CBC Radio, 2019; Suncor Energy Inc., 2017b). Furthermore, it is argued that the economy should be diversified beyond fossil fuels, with an emphasis on the combination of renewable and traditional energy. (e.g. Calgary Herald, 2018a). This is also argued in the different industry reports throughout the years. Furthermore, this discourse is in favour of the approval of new pipelines, similarly to the business-as-usual discourse. However, next to the financial benefits that pipelines provide, it is also argued that using pipelines to transport oil is a safe and efficient way (CTVNews.ca., 2014), as well as low-emission way compared to rail cars (Puzic & Dehaas, 2015; French, 2018). Next, this discourse focuses on innovation and technological advancements to reduce greenhouse gas emissions, where the industry plays an important role (e.g. Cheadle, 2015a; Staples, 2020). This is also widely suggested in the industry reports.

5.4.2. Actors

With this discourse both the positive and negative aspects of the industry are recognized. Thus, that the industry are large emitters and contribute to climate change, but also that they generate jobs and wealth, and provide clean energy (Healing, 2018). In addition, it is stated that the industry worked hard to reduce their greenhouse gas emissions, and should receive credit for that. Furthermore, Suncor Energy Inc. (2016; 2017b; 2019b) states that the industry is part of the problem through their emissions, but can also be a part of the solution through innovation. This is also stated in the Climate Leadership Plan (Energy, 2018). Furthermore, also Alberta is seen as a climate leader in several policy documents (Energy, 2018a; Government of Alberta, 2015), as well as in and news articles (e.g. Derworiz, 2015; Urquhart, 2018; Graney & French, 2019).

Those that are perceived as bad-guys are those that either those work against climate mitigation measures, as it is said that this is also necessary for economic growth. But also those that are far-left environmentalists, and want to get rid of the industry, as they are said to be needed for the economy.

5.4.3. Goal

When looking at the storylines and perceptions of actors in this discourse, it is focussed on environmental protection as well as stimulating economic growth. Thus, the goal of this discourse is to reduce greenhouse gas emissions, while also stimulating the economy.

5.5 Summary of the discourses

In this section, the three discourses that are found will be summarized. The first discourse is the business-as-usual discourse. This discourse is critical on climate action as it can stifle economic development and the oil industry. In addition the discourse opposes the carbon tax and challenges the constitutionality of it. Next, there is an emphasis on that the contribution of Alberta and the oil sands to the total greenhouse gas emissions is small. Furthermore, there are questions about the cause of climate change and the link between climate change and natural disasters such as the wildfires. Next, it is argued that the fossil fuel demand will remain, and thus should not phase them out, as that would only lead to the transfer of wealth and jobs to other jurisdictions. Consequently, this discourse is in favour of new pipelines as they are needed for economic success and job opportunities. Last, this discourse emphasizes that the oil industry in Alberta is the most responsible compared to other jurisdictions and thus oil can best come from Alberta. All in all, the goal of this discourse is to keep the industry competitive, and not increase the economic costs.

The environmental discourse is characterised by the importance of combatting climate change and having more or better climate action plans. Hence, this discourse is in favour of a carbon tax, and does not challenge the constitutionality of it. Furthermore, this discourse emphasizes the significant contribution of the province and the oilsands to the total amount of greenhouse gas emissions in Canada, as well as the scientific evidence for the link between climate change and natural disasters such as the wildfires. Next, the environmental discourse aims to phase out fossil fuels as soon as possible, and increase investments in renewable energy. Furthermore, this discourse opposes the construction of new pipelines as they are not needed for economic success, as there are local environmental risks, and as they cannot be built to meet climate targets. Lastly, the fossil fuel industry is seen as a polluting industry that should not grow anymore. All in all, the goal of this discourse is to increase the amount of climate action to reduce greenhouse gas emissions.

The third discourse is the green growth discourse. This discourse is the least straightforward discourse, and contains elements of pro-environmental and business-as-usual discourse. Firstly, this discourse believes climate action is needed, both to combat climate change and to benefit the industry and economy. Furthermore, the need to reduce emissions is expressed, but without stopping economic development. In addition, it is emphasized that both reducing emissions and economic growth can and need to occur next to each other. In line with this is the suggested need for pipelines to create new markets. Furthermore, it is emphasized that it is the most safe and efficient way to transport oil. Moreover, the need to increase the share of renewable energy, while also remaining to produce traditional energy is emphasized. With regards to the fossil fuel industry, it is emphasized that the industry has worked hard to reduce their emissions. All in all, the goal of this discourse is to reduce greenhouse gas emissions, while also stimulating the economy.

When looking at the timing throughout the years this research has been conducted, no significant differences were found between year. Certain topics were more dominant around certain events. For example, around the time the UCP government repealed the carbon tax, this was often debated, and around the times of big wildfires occurred, this was discussed more often.

However, there no significant difference could be seen in the discourses that are present throughout time, or between election cycles. With regard to the industry reports, it was noticed that the reports got more elaborate over time, or even multiple reports were published in a year, as occurred for Suncor Energy Inc.

Table 3: Overview of the discourses according to indicators of the analytical framework

Indicators	Measures	Discourse 1: Business-as-usual discourse	Discourse 2: environmental discourse	Discourse 3: Green growth discourse
Storylines	Climate mitigation policies	Harm economic growth	Climate change policies are not enough	Need policies to combat climate change, but not kill the industry
	Carbon tax	Oppose	Favour	Favour
		Unconstitutional	Constitutional	Constitutional
	Climate change	Climate change is real/doubt whether climate change is caused by humans	Climate change is a threat	Climate change is real, and emissions by the industry contribute
		contribution Alberta and oil sands to GHG emissions is small	Alberta and the oilsands contribute significantly to GHG emissions	Need to reduce GHG emission
		Question link between climate change and wildfires	Clear link between climate change and wildfires	
	Pipelines	Favour	Oppose	Favour
Fossil fuels and energy	Demand fossil fuels remains, so should not phase them out	Need to phase out fossil fuels as soon as possible	Need them as well as renewable energy, but need to phase them out slowly	
		Need to diversify the economy	Potential of new technologies	
Actors	Good-guys	Industry workers	Environmentalists	Workers Industry
	Bad-guys	Far-left environmentalists Federal government	Industry (Conservative) government	Far-left environmentalists Conservatives Industry
Goal		Keep industry competitive and stimulate economic growth	More climate action to reduce GHG emissions	Reduce GHG emissions while stimulating economic growth

5.6 Competition and institutionalization

As is visualized in the conceptual framework in figure 2, different discourses compete with each other to become the dominant discourse and achieve institutionalisation. Here, there will be elaborated on this, and will be seen whether there has been a shift in dominance of a discourse.

5.6.1. Competition

The discourses that have the most tensions between each other are clearly the business-as-usual discourse and environmental discourse, as the aims of these two discourses are quite opposite of each other. There are different elements on which they give contradicting information. For example, this is clear when it comes to the share of greenhouse gas emissions of Alberta, and the importance of the fossil fuel industry for the economy and job security. The green growth discourse sits in the middle of these discourses, containing elements of both. However, this discourse does reinforce the message of the business-as-usual discourse that the fossil fuel industry is important for the economy of Alberta and Canada. This has consequences for the environmental discourse, whose message is contradicted by two discourses. The importance of the fossil fuel industry for the Albertan economy, and the benefits that this industry provides in terms of economic growth and job security is rarely questioned. This while there are multiple scientific articles that Alberta does not benefit as much from the oil and gas industry as these discourses suggest (e.g. Foss, 2015; Dalby, 2019). The impact of the competition is visible when looking at the institutionalisation, as will be further explained in the next section.

5.6.2. Institutionalisation

As is mentioned in the analytical framework in table 1, discourse institutionalisation is measured through whether the storylines, positioning of actors, and goals are present in the policy output. Here, there will be looked at the relevant policy output that was introduced by the NDP government and the UCP government, which can be seen in table 4 with the corresponding discourse.

The Climate Leadership Plan and Climate Leadership act both correspond to the green growth discourse. Achieving economic competitiveness, creating jobs and being environmentally responsible are being discussed as a goal, as well as diversifying the economy (Energy, 2018; Government of Alberta, 2015; Climate Leadership Act, 2017). This also becomes clear from the following quote from the Climate Leadership Plan: *“Alberta’s Climate Leadership Plan was introduced in 2015 to reduce carbon emissions and diversify our economy”* (Energy, 2018, p.1). Furthermore, there is emphasis on innovation and the development of clean technology to reduce greenhouse gas emissions and stimulate economic growth (Energy, 2018), which also corresponds with the green growth discourse. When looking at the Climate Change Innovation and Technology Framework, and the Research and Innovation Action plan, both achieving a diversified economy, and the opportunities from innovation and new technologies to reduce greenhouse gas emissions is emphasized (Government of Alberta, 2017a; 2017b). This corresponds with the green growth discourse as well. The carbon competitiveness incentive regulation provides a benchmark for CO₂ emissions for large emitters (Carbon Competitiveness Incentive Regulation, 2017). This regulation corresponds mostly with the green growth discourse as well. The environmental discourse has expressed that the limitations for greenhouse gas emissions is not strict enough, hence this regulation does not fit this discourse. The carbon tax repeal corresponds to the business-as-usual discourse. This discourse has been expressing opposition to the provincial carbon tax that was implemented by the NDP government, but also to the federal carbon tax, calling it unconstitutional. Last, the Technology Innovation and Emission Reduction

(TIER) regulation replaced the Carbon Competitiveness Incentive Regulation and is similar to that. For the same reasons, the TIER corresponds most with the green growth discourse.

As can be seen in table 4, the discourse that is most dominant and achieved institutionalisation is the green growth discourse. The environmental discourse did not achieve institutionalisation at all, which could be expected as this discourse and its storylines were least present in the documents that were analysed.

Table 4: Overview of the discourses present in the policy output

Policy output	Discourse	Year
Climate leadership plan	Green growth	2015
Climate leadership act (including carbon tax)	Green growth	2016
Climate Change Innovation and Technology Framework	Green growth	2017
Alberta Research and Innovation Action Plan 2017-2020	Green growth	2017
Carbon competitiveness incentive regulation	Green growth	2018
Carbon tax repeal	Economic	2019
Technology innovation and emissions reduction regulation	Green growth	2020

6. Discussion

6.1 Theoretical implications

In this section, the results of the research will be discussed and linked to the theory. First, there will be elaborated on the institutionalisation of the discourses. Then, the discussion will compare the discourses or storylines that were found in comparable cases, and see if the discourses that were found correspond with those. Hereafter, there will be looked at discourses that were present in Alberta and Canada before the timeframe of this study.

6.1.1. Institutionalisation discourses

As was mentioned in section 5.8, the green growth discourse achieved institutionalisation, which suggest that this is the most hegemonic discourse. However, also the business-as-usual discourse achieved institutionalisation, as can be seen from the carbon tax repeal. With regard to the institutionalisation, the analysis looked at the institutionalisation of the discourses through the policy output. However, the discourses could also have influenced what is not done. For example, the UCP government did not put forward a new climate leadership act, or a comparable policy to this, after the previous ones were terminated. Not putting forward a new climate leadership act is most in line with the business-as-usual discourse, as this discourse was most critical on this act and on climate action in general.

In terms of presence of the discourses, it seems that the green growth discourse is most often present in the news articles and industry reports. On certain issues a large difference could be seen in presence of certain arguments. A significant difference could be seen in the discussion around pipelines, where arguments in favour of approval of new pipelines were more often used than arguments against the approval. Furthermore, with regard to the carbon tax, the arguments in favour of the carbon tax occurred significantly more often than arguments against the carbon tax. However, it is difficult to draw conclusions from this as some arguments are used by different discourses, and because of limitations of the sample size, as further discussed in the discussion.

The institutionalisation and presence of these discourses show that the oil and gas industry have a prominent influence on the policy output, as well as on the discourses used by other actors. The discourse analysis thus showed why certain policies were implemented. However, when looking at the policy output and the discourses they follow, the carbon tax repeal stands out. The three companies that were analysed all showed a support for the carbon tax in their reports, and arguments in favour of the carbon tax were significantly more often present in the news articles than arguments opposing the carbon tax. Nonetheless, the carbon tax was still repealed. There can be multiple explanations for this. First of all, this could suggest that private communication between different actors have influenced the decision to repeal the carbon tax. Another explanation would be that the business-as-usual discourse is more widely carried in everyday life in Alberta than is represented in media. Boulliand and Belland (2019) researched the messages around climate change that are present in media in Alberta, and the information sources people use and their trust in them. They concluded that those that support the most right-oriented party, do not trust and use news media. This could suggest that right-oriented viewpoints are less presented in media. However, further research would be needed to draw a conclusion on whether the presence of discourses in media corresponds with the presence of discourses in everyday life.

6.1.2. Comparing discourses to comparable cases

As explained in sections 5.6 and 5.7, three discourses were found. Before the research was conducted, it was expected that two discourses would be present, which was based on literature (section 3.2). These discourses were named the fossil fuel discourse and climate mitigation discourse, and generally correspond with the environmental and business-as-usual discourse that were identified in the research. The green growth discourse, which is a more moderate discourse, was not expected to be found. This shows that before the research was conducted, the debates were expected to be more clearly divided between two camps, while there is more of a spectrum. This is also linked to literature, where often two discourses are discussed (e.g. Hajer, 1993; Davidson & MacKendrick, 2004).

Comparing the discourses to previous research, the green growth discourse is similar to the ecological modernization discourse that was identified in previous research. (e.g. Hajer 1993; Davidson and MacKendrick, 2004). Ecological modernization is characterised by the view that environmental protection and economic growth can occur next to each other, and thus believes in a decoupling of economic growth and environmental pollution (Johansson & Henriksson, 2020). This corresponds with the green growth discourse that was identified in this research as it focusses as well on achieving both economic growth as well as climate action. The business-as-usual discourse as described in this research is comparable to the storylines of the resource-based discourse coalition as identified in the research by Bulkeley (2000). These storylines include the view that climate action should have a low economic impact and the importance of considering (national) economic interests.

When looking specifically at the storylines the industry used in this research, it is different from some other research that was done. For example, research by Gaither and Gaither (2016) showed that the fossil fuel industry in the United States used narratives that reduced support for climate mitigation strategies and promote uncertainty around climate change. This was not found in this research, as the industry showed a general support for climate action, and often also the carbon tax. Furthermore, the industry recognized that climate change is occurring and acknowledged the role of the industry in emitting greenhouse gas emissions. The research by Gaither and Gaither (2016) looked at the spring of 2014, and thus the timeframe is not likely the reasons for the difference in storylines, as the support for climate action was also found already in the industry reports from 2014. What could have caused the difference is that the research by Gaither and Gaither (2016) looked at advertisements by the industry, rather than the reports.

However, there are more similarities with the research by Jaworska (2018), who researched the discourses on climate change in sustainability reports from oil companies from 2000 to 2013. For example, it is stated that combatting climate change and a growing energy demand are often stated together, and is posed as a dual challenge, which is also found in this research. Furthermore, the research by Jaworska (2018) shows that the industry mostly put solutions forward with regard to innovation and technical solutions, which was also found in the industry reports analysed in this research. However, the research by Jaworska (2018) also found doubt is suggested in whether climate change is caused by greenhouse gas emissions, which was not found in this research. In addition, Jaworska (2018) found that the discourse the industry used “positions the oil industry not as a contributor but as a victim” (p. 215) of climate change, which was also not found in this research.

6.1.3. Comparing discourses to previous discourses in Canada

Dalby (2019) studied the political discourses used by the federal Canadian government. Here, Dalby (2019) explained that the Harper government, which was in place from 2006 to 2015 (Steven Harper, n.d.), did not show concerns for climate change, or the need for climate action. Furthermore, he emphasized the importance of Canadian fuel and it being necessary for energy security, as well as part of the national identity (Dalby, 2019). The importance of resource extraction and the tar sands by the Harper government, which aligns with the business-as-usual discourse as described in the results, is even called nearly hegemonic by Dalby (2019). However, Dalby (2019) also acknowledged the opposition to this discourse by other actors such as environmentalists and First Nations. This discourse emphasizes the threat of climate change and the scientific evidence of this (Dalby, 2019), thus aligning with the environmental discourse as described in this research. During the Trudeau government, there has widely spread that they are willing to work on mitigation climate change (Dalby, 2019). However, the focus has been on market mechanisms and policies such as the carbon tax, rather than on deeper discussions on a long-term vision and a future beyond fossil fuel extraction (Dalby, 2019). This aligns generally with the green growth discourse that was discussed in this resource. Furthermore, Dalby (2019) calls policy instruments such as the carbon tax and technological fixes Ecological Modernization policy instruments. Lastly, Dalby (2019) describes the arguments of environmentalists of moving away from an economy based on fossil fuel extraction, similarly to that of the environmental discourse of this research.

This study shows that the discourses found in Alberta are also visible in Canada as a whole, and also before the time period that this research took place. In addition, there was expressed that even though the language used by the Harper government and Trudeau government was different, the climate policies did not differ as much (Dalby, 2019). Furthermore, even though this research looks at Canada as a whole, it is still relevant as the fossil fuel extraction and the oil sands are important topics for debate and discourses in both Canada and Alberta.

Boulianne and Belland (2019) mentioned that in both the federal government and the provincial government of Alberta, a shift has occurred to a more progressive and environmentally friendly government in 2015. Furthermore, they suggested that “these changes may mark a turning point in climate change discourse and action in Canada” (p. 91). However, here it is argued that this turning point did not occur, as the environmental discourse still remained the least dominant discourse.

6.2 Policy implications

This research shows that the environmental discourse did not institutionalize in the policy output while the green growth discourse did. This is the discourse that promote market-based and technical solutions to climate change. However, the research by Wright and Nyberg (2017) shows that market-based solutions and corporate climate leadership is insufficient to deal with the challenge of climate change, even though most of the managers of the businesses in the research were concerned and emotionally invested in the consequences of climate change. In addition, the research concludes that governments are currently favouring solutions that are market-based and ensure profit maximization (Wright & Nyberg, 2017), as is also visible in the case of Alberta. Furthermore, according to Dalby (2019), in order to mitigate climate change and to keep temperature rise to below 2 degrees Celsius, there need to be a change in the Albertan economy that is based on the extraction of fossil fuels, and not just implement measures such as the carbon tax.

Foss (2015) suggests that Alberta should stop investing in the fossil fuel industry, and instead invest in renewable energy and other sustainable practices. This aligns mostly with the environmental discourse, however, this discourse did not achieve institutionalisation, and can be seen as the least hegemonic discourse. Thus, in order for Alberta to reduce greenhouse gas emissions and implement substantial change, the environmental discourse needs to gain dominance. This is difficult because of the large and influential oil and gas industry in Alberta, but some suggestions will be done here on achieving this. Firstly, the environmental discourse can try to find more common ground with the green growth discourse, and the discourses the industry use, and in this way increase the dominance of certain arguments, while decreasing the dominance of the business-as-usual discourse. It can be argued that it is most important to emphasize that the current economic system is not sustainable in the long term (Foss, 2015). In order for a large change to occur in the political economy of Alberta, pressure can come from outside of Alberta. For example, the federal government can impose climate mitigation policies on provinces, as was shown by the GGPPA. This is a more top-down way causing change in Alberta, and will likely cause more resistance. Furthermore, also investors in the oil sands can put pressure on the industry by moving their investments away towards a more sustainable industry. However, so far this has not led to significant changes in discourse. More research can be done on this topic in jurisdictions where an environmental discourse is more dominant, or even hegemonic. Lessons can be learned from this that could be applied to Alberta.

6.3 Limitations of research

There are several limitations of this study, which will be elaborated on here. Firstly, composing the different discourses including its storylines, actor perceptions and goals is a somewhat ambiguous process. There are not very distinct discourses visible in the data, but there can be overlap between them. In this research, this is especially visible in the green growth discourse, which contains elements of the other two discourses and have less distinct storylines. Still, it is possible to broadly identify the discourses and the institutionalisation of them.

This study used three different sources of data: newspaper articles, industry reports and policy documents. However, there are also other sources that could have been used to analyse the discourses that are present. For example, another source that could have been added are social media posts. Social media posts have become important communication tools nowadays, and can be a space for views that are not mainstream (Bouvier & Machin, 2018). Furthermore, social media can be relevant to analyse and also organisations and institutions use social media to spread their ideas and debate on certain issues (Bouvier & Machin, 2018). Using more different sources would have increased triangulation of sources, and thus the validity (Leung, 2015). However, even though also other data would have been suitable for analysis, it is not expected that this would have significantly changed the outcome of the research as already different types of data were used, that provided a wide range of storylines. However, as non-mainstream views are more presented in social media posts, it can be expected that views such as climate denialism would be more often present than in the data sources used for this research.

Furthermore, there are many different newspaper articles regarding climate change and climate mitigation in Alberta. In this research, a limited number of articles were selected per year per news platform in order to obtain articles from different platforms and years. However, this led to a significant number of articles not being selected and analysed, which could have contained different information. However, despite this limitation, it can be expected that this would not have altered the

results as the main storylines will be present in multiple different articles. In addition, other search terms could have been used. For example, there was chosen to use the term climate change, while the term global warming was not used. However, climate change is significantly more used than global warming, and the content of the articles did not seem to differ from each other.

Lastly, this research only looked at the case of Alberta, which is why no generalized conclusions can be given. However, it is expected that similar results will be found in jurisdictions that have a prominent fossil fuel industry as well. This is also because similar discourses were found in previous research, as was explained in section 6.1.2.

7. Conclusion

Climate action is needed in order for greenhouse gas emissions to be reduced and mitigate climate change. However, which policies get implemented depend on the discourses that are present and the dominance of those discourses. All in all, the research question that guided this research was: *To what extent, and in what way, do the discourses on climate mitigation influence the approaches to reconcile climate mitigation policies with fossil fuel dependencies in the province of Alberta, Canada?* This research looked at discourses in Alberta, Canada where a prominent fossil fuel industry is present. This industry is seen as an important part of the economy for Alberta, and seems to be a part of the identity of Albertans.

News articles, industry reports and policy documents were analysed, after which the discourses were identified, and the competition and institutionalisation was analysed. Three discourses were found in this case study: a business-as-usual discourse, environmental discourse, and a green growth discourse. The business-as-usual discourse is characterised by a focus on the economic consequences of climate action, and the importance of fossil fuels and the industry for the economy. Furthermore, this discourse downplays the part of Alberta and the oil and gas industry in the total greenhouse gas emissions, and the role of emissions in causing extreme weather events. The environmental discourse is characterised by a focus on the environmental consequences of the fossil fuel industry, and the need for climate action to mitigate climate change. Furthermore, this discourse emphasizes a need to diversify the economy, and leave fossil fuels in the ground. Lastly, the green growth discourse is characterised by a focus on the need for climate action for both reducing greenhouse gas emissions and economic growth. Furthermore, this discourse focusses on innovation and new technologies to reduce greenhouse gas emissions.

When looking at the institutionalisation, it can be seen that mostly the green growth discourse institutionalised in the climate mitigation policies that were enacted in Alberta. However, also the business-as-usual discourse institutionalised. All in all, these two discourses do not challenge the political economy of Alberta, and put forward solutions that are market-based and based on technology. Thus, this research clearly shows the influence of the fossil fuel industry on the discourses that are present and their influence on the policy output. This makes substantial climate action difficult to achieve, with consequences for the regional and global climate. In order for more climate mitigation policies to be put in place, it is argued that it is required for the environmental discourse to gain dominance and institutionalize into policy practices. All in all, this research thus shows the difficulties of substantial climate action in a jurisdiction with an economy that is based on fossil fuel extraction.

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