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Climate & Coal vs. Coral

An analysis on the Australian Government policy shift
concerning the Great Barrier Reef

By Marlene Huijer

Student number: 3839842

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Supervisor: Dr. Marloes Bakker

Second Reader: Dr. Carel Dieperink

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*“The largest threat to the reef is ignorance among
a powerful few” – Chairman of the Great Barrier Reef
Marine Park Authority, 1988.*

Abstract

The Great Barrier Reef has lost more than 50 percent of its coral cover and preservation of the Great Barrier Reef is more important than ever in these times of climate change and industrial growth. With the appointment of the new Prime Minister Tony Abbott in 2013, Australia has made a shift in its climate change policies and mining policies, in a way that is concerning for the health of the Reef. In this paper the underlying factors that enabled the shift to happen are investigated. This is done by using a combination of two prominent theories in the field of policy analysis, the Multiple Streams Theory of Kingdon (1995) and the Punctuated Equilibrium Model of Baumgartner and Jones (1991). From these theories empirical questions were distilled to investigate the situation at the time of the policy shift in 2013. Tony Abbott, as policy entrepreneur, and the media, important for the attention, were important in framing climate change in a negative way. The Australian population to be more sceptic on climate change which turned out that they were eventually voting for an climate-sceptic. The election of climate sceptic Tony Abbott resulted mostly in repealing existing policies for climate change, and were more in favour of economic growth especially in the region of Queensland.

Key concepts

Great Barrier Reef, climate change, policy analysis, policy change, agenda-setting, policy subsystems

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1. Introduction

The Great Barrier Reef (GBR) in Australia is slowly degrading, as well as reef conditions worldwide. A series of large scale and influential publications have documented the decline of coral cover and ecosystem conditions of the GBR. Over the last 40 years there has been a loss of more than 50 percent of reef building corals across the reef (Brodie & Waterhouse, 2012; Brodie et al., 2012; Hughes et al, 2010). The decline of the GBR is of great concern since the GBR is the world's largest continuous reef system and on the UNESCO World Heritage List in 1981 (UNESCO, nd). It also has an economic value, providing 70.000 jobs in the tourism sector in the adjacent region of Queensland and providing an income of 10 billion euro per year (Stoekl et al., 2014). The most serious threats for the reef are global climate change and consequently ocean acidification (Hoegh-Guldberg, et al., 2007), and the increasing mining industry in the region of Queensland (Great Barrier Reef Marine Park Authority, 2014).

Under Tony Abbot's Government, Australia has shifted from being one of the policy frontrunners in environment and climate change, towards achieving more sustainable wealth in the nation through more economic growth. (Commonwealth of Australia, 2014). This vision is being expressed through the objectives of the development plans for the region of Queensland to create one of the world's largest export industry for coal and coal seam gas. Australia's economy is highly dependent on fossil-fuels. In particular large coal, natural gas, uranium and mineral exports provide Australia with the wealth of today. They also rely heavily on coal for domestic electricity generation. (Crowley, 2010). Economic development has become a top priority of the regional and the national government (State of Queensland, 2014) and this strikes with reducing carbon emissions and the preservation of the GBR.

The topic policy change is a widely researched area in public policy and political science. Many theories exist on policy change (Sabatier & Weible, 2014; Kingdon, 1995; Baumgartner and Jones, 1991). A disadvantage of these theories is that they do not have a clear methodology on how policy shifts should be analysed. This research paper analyses the GBR policy shift by combining two prominent scientific theories and designing with these theories a method to find the underlying factors that have guided the policy shift. The research question therefore is:

What caused the shift of policies concerning the health of the Great Barrier Reef in Australia ?

The main question will be answered by using the following sub-questions:

1. Which factors have an influence on policy change?
2. Which policies were important in the three years before the changes in policies were made?
3. What were the underlying factors for the change in policy before the elections in 2013?

Scientific relevance

The relevance of this study lies in particular in the testing of theory with reality: The processes prior, during and after the elections in 2013 will be analysed with the provided guidelines of the scientific theories. There has not been conducted any research yet on the policy shift in Australia. The present study made a start exploring this topic by combining two prominent theories which could be applied to explain obvious policy shifts. This method could be elaborated more on in other studies.

Social relevance

In this research the policy shift in Australia is being analysed and gives specific answers on the reasons behind the shift. Using the knowledge from this paper could help the Australian population by the next elections. The results from this study could provide the Australian population with more background

knowledge on an economical and environmentally important topic. Which could contribute to a more educated choice during the next elections.

Reading guide

The research proceeds in the following way: chapter 2 will justify the scope of this research and additionally presents the two theories that will be used to analyse the policy change. Chapter 3 follows with the methodological section. Chapter 4 elaborates on the case study which is the Australian situation in the policy shift. Lastly, section 5 finishes with a conclusion, ideas for further research and a discussion.

2. Theoretical Framework

Which factors have an influence on policy change?

Several theories have been developed to analyse policy change. However, the theories that are applicable depend on the different scope of the analysis. In this research report, policy change will be analysed partly through the social-interaction scope (Runhaar & Cörvers, 2008).

The social-interaction approach sees policy as a complex process. The interaction and power relationships between the actors are the most important features in this scope (Driessen et al., 2007). Predicting behaviours and decisions in a policy arena based on *rational choice* are, of limited use. This is because problems and preferences are not well known, and selecting the alternative that is the most beneficial is impossible in the field of analysing the policy process (van Laerhoven, 2014). Who pays attention to what and when is in this research critical.

In recent decades, policy change have been studied extensively. Many of these studies have contributed to an increasing amount of knowledge on policy change and the reasons behind it (Sabatier, 1999). In the situation of the policy shift in Australia, policy change is being analysed by two theories in the field of agenda-setting and policy change studies that are the most prominent and documented and therefore are most relevant. (Sabatier, 1999). Also, both of them fit with the social-interaction scope of this research. Firstly, the Multiple Streams Model of Kingdon (1995), which focuses in particular on agenda-setting and policy entrepreneurs. Secondly, the Punctuated Equilibrium theory of Baumgartner and Jones (1991), which is a widely adopted theory in the field of policy analysis to study policy changes by means of attention. These theories have been largely developed in the US context, and some have criticized the idea on how these theories could be applied in political settings other than democratic systems. Baumgartner, Green-Pedersen and Jones (2006) have proven that the theories can be used in nine other political systems (and are therefore widely applicable). Since they are still very well suited for a democratic system such as in Australia, these theories will be used.

2.1 Multiple Streams Model

Kingdon's Multiple Streams Model (1995) elaborates on the agenda-setting and policy entrepreneurs and explains why certain issues are put on the policy agenda. According to Kingdon, policy making/governance can be seen as an *organised anarchy*. This is an organisation where legislators and bureaucrats come and go and non-government actor participation varies per policy-area. It can be considered as a collection of ideas, and has no coherent structure like a regular enterprise (van Laerhoven, 2014).

2.1.1. Streams

The first stream is the *problem* stream, these are focusing events which draw attention to problematic conditions where after the attention is fixed by the media and by *policy entrepreneurs*. The second stream is being formed by the different *political parties* and the third stream is all about the *solutions*, which policy entrepreneurs are trying link with another stream. According to Kingdon, the greatest policy changes are possible when the three streams are coupled at critical moments in time (*Figure 1*). This is when there are "*opportunities for advocates of proposals to push their pet solutions, or to push attention to their special problem*" (Kingdon, 1995). This coupling of streams can result in a policy window, generally caused by changes in the problem, or in the political streams. The windows then appear predictably (as a result of elections) or unpredictably (by a sudden crisis) (Soroka, 1999). Kingdon's theory

also provides a significant role for the *policy entrepreneurs* or policy administrators. Who was responsible for the new policy.

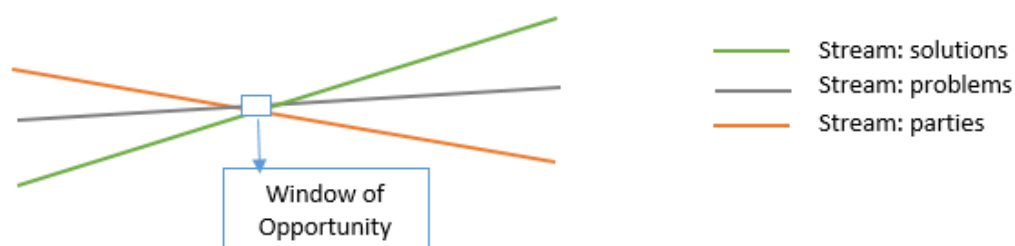


Figure 1. A graphical representation of the window of opportunity

2.1.2. Policy Entrepreneurs

Policy entrepreneurs are powerbrokers and manipulators of the problematic preferences mentioned before. They are persistent, skilled at coupling and will find an opportunity to attach problems to their own solutions. They manage to find politicians receptive to their ideas. Their success is determined by their access level to policymakers, level of resources at their disposal and effectiveness of their manipulating strategies.

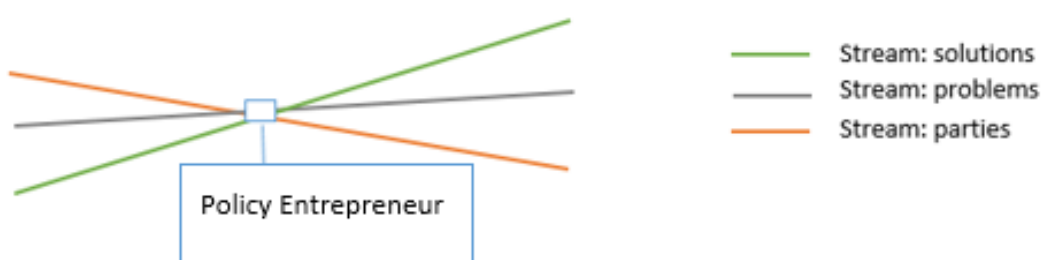


Figure 2. A graphical representation of the moment a policy entrepreneurs finds its opportunity

2.2 Punctuated Equilibrium Theory

The Punctuated Equilibrium theory of Baumgartner, Jones (1991) is used to analyse a policy change over a longer period of time. This approach tries to understand the stability and change in public policymaking. While these two elements are both very important in the policy process, most policy models have been successful in explaining either the stability, or the change. The Punctuated Equilibrium Model encompasses both (Baumgartner, Jones & Mortensen, 2014). The emphasis lays here on two related elements of the policy process: policy subsystems and agenda-setting. These two concepts will be discussed later on.

The general idea of the theory is that policy change develops incrementally over a longer period of time and that this development is occasionally being interrupted. This interruption begins when social issues are defined in public discussions in different ways and when these issues rise and fall in the public agenda. This rise and fall is because of a change in public and media attention, the involvement of new interest groups or a change/reform in institution and laws. The options for the existing policies could then either be: reinforcing the policy, or questioning it. Reinforcement of policies will create great obstacles to the incremental development of policy and questioning the policies at the most

fundamental level will create opportunities for major policy reversals. In this so-called punctuated equilibrium, policy changes are subsequently happening in a rapid speed in a short time-span. After this moment in time, a new period of incremental development begins. The Punctuated Equilibrium Model is displayed in Figure 3.

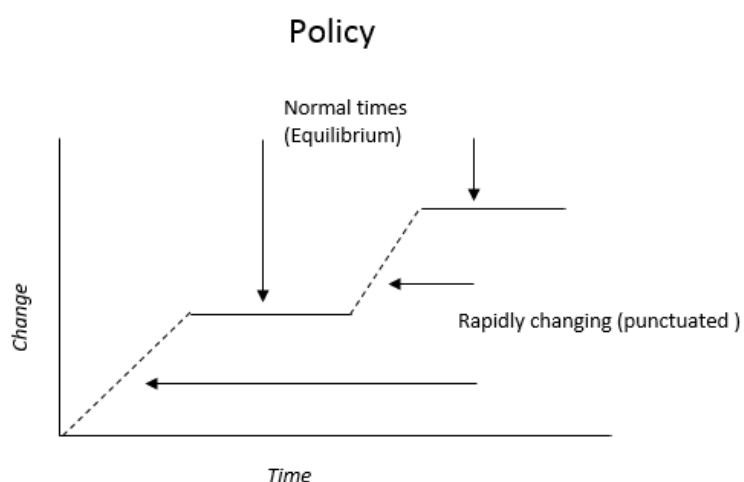


Figure 3. Punctuated Equilibrium Model based on the theory of Baumgartner, Jones (1991)

The theory aims to explain the periods of long stability and short changes and this is being done by combining two approaches: policy subsystems and agenda-setting.

2.2.1. Policy Subsystems

With policy subsystems, the main focus is identifying stable relationships between interest groups and public officials. These relationships last since participants are sharing agreement about the nature of a policy problem and few other actors are interested in the issues (Cairney, 2011). Baumgartner and Jones (1991) pay special attention to monopolistic arrangements in the policy subsystems. The most involved politicians in the subsystems are able to protect the *policy monopoly* by *framing* the issue in a particular way and limiting access of other participants. Framing means defining an image (this is how an issue is portrayed and categorised) and is the most dominant image of the policy problem. Defining the problem is a crucial step in the policy process since the allocation of resources follows the image of the policy problem. Policy stability is depending on the ability of policy subsystems to maintain the policy monopoly.

2.2.2. Agenda-setting

Agenda-setting is the study of public, media and government attention to policy issues. A key focus is here on issues that attract high levels of attention, following a crisis or triggering event (Carney, 2011). High levels of attention can also be caused by interest groups or policy entrepreneurs that are trying to draw the attention to 'their' issues. Shifts in attention are connected here to venue shifts in which an issue can become the jurisdiction of more than one institution at the same time. Excluded groups will try to shift the debate from within by for example, appealing to public officials and questioning the existing approach. If unsuccessful, they have the tendency to go venue-shopping. This means that they will be going to search for influential audiences somewhere else.

2.3 Conceptual model

A policy change in the present study is being defined by analysing a major shift in agenda-setting (attention), and changes in problem definition. The appearance of special policy entrepreneurs is crucial. They can link two or more 'streams' together, are able to frame the problem in a certain way, and are able to maintain the policy monopoly. (Hall, 1993; Sabatier 1988; Sabatier and Jenkins, 1993 in Walgrave en Varone (2008).

The dependent variable, policy change, is put together in a conceptual model with the two independent variables which contain all the concepts derived from the previous discussed theories of Kingdon, Baumgartner and Jones.

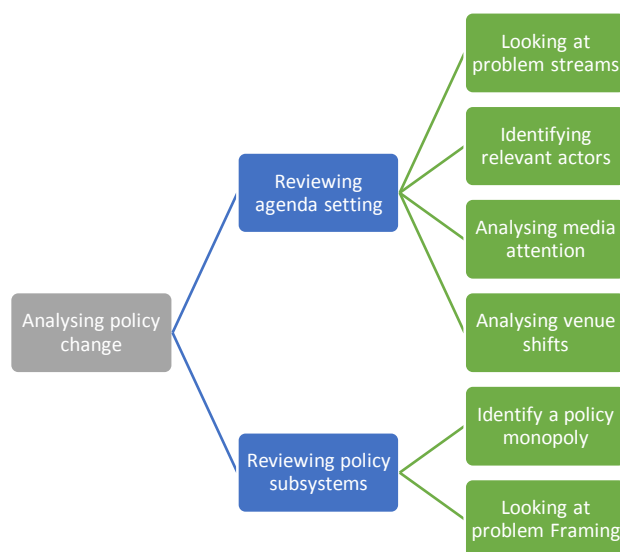


Figure 4. Conceptual model derived from the theories of Kingdon (1995) and Baumgartner and Jones (1991) on which factors are of influence on policy change and how these factors are useful in explaining the policy change.

These concepts are then used to generate empirical questions on why the Australian government prompt particular problems and solutions to be addressed and others to be ignored. The similarities in the two theories are put together and are displayed in the composite model in Figure 5. The model displays the process of policy change and is made finite. This means that at the end of the process, policy takes a new road. Not all the factors from the theories are taken into account in this study venue shifts is left out since this was too hard to identify.

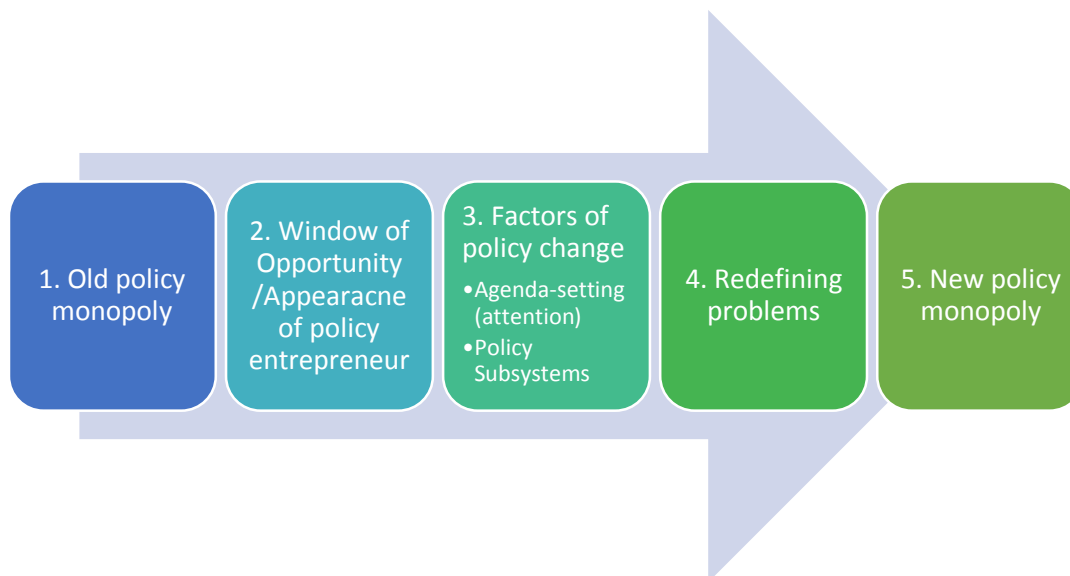


Figure 5 . The model of the policy change process derived from the theories of Kingdon (1995) and Baumgartner and Jones (1991)

The model is used to derive the following empirical questions on why there was a policy shift in 2013. Although redefining problems and the establishment are two different processes, in this research we take them together in question 4. The questions that will be used in the analysis are:

1. How can the “old” policy monopoly of the previous cabinet be identified?
2. How did the policy entrepreneur manage to break through the window of opportunity?
3. What was the agenda-setting (attention) before the policy change?
4. How are problems redefined? How can the new policy monopoly be identified?

3. Method

3.1.1. Modus Operandi Method

As a guideline in this study, the *modus operandi* method is used (Hoogerwerf, 1999). In this method, the emphasis is more on reasoning in a logical way, than the empirical investigation. Investigating policy change cannot be studied in a lab and adding to that, there was no possibility to have interviews with the people involved in the process. In the literature, the modus operandi method is described in the following way:

1. Make an inventory of the factors that, in principle, have an effect on the target variable;
2. Check whether in the current situation the factors provide an explanation;
3. Explain if these factors influence on target variable in a positive, or a negative way.

In the following section it will be described how the modus operandi will be used in this research, and which data is necessary.

1. For the inventory of factors that are of influence on policy change, two theories of Kingdon (1995) and Baumgartner and Jones (1991) are used to distillate factors that could explain policy change. These factors are then used later as a guideline to analyse the policy shift in Australia. The theories can be found in academic journals which are accessed through Google Scholar.
2. In the second step the theory is tested with the reality using the case study of the policy shift in Australia in 2013. This case study is used because it is clear that there has been a policy change, and the factors are of use to explain the underlying reasons behind this change. The analysis is being done by using the research questions derived from the conceptual model. The questions are used to highlight the role of the policy entrepreneur, in this case the Prime minister Tony Abbott, since he has an important role in changing policies. Also, the role of attention will be highlighted since the role of the media in setting political agendas and impacting on public opinion has been proven (Baumgartner & Jones, 1993).

Data collected for the analysis consist mostly of newspaper documents collected through the academic website LexisNexis and policy documents of the Australian government. Search terms are used such as: "Tony Abbott, coal, elections, Gillard, Carbon Tax, Mineral Resource Tax, Media, Australia, etc. Other literature was collected by using Scopus, Google, Google Scholar, and by using the snowball method. The academic literature is peer reviewed, whereas news articles, and policy documents belong to the 'grey' literature.

3. The final step is to end the analysis with the remark if the factors had a causal relationship with the change in policy.

4. Case Study: The Policy shift in 2013

4.1 Background

Which policies were important in the three years before the changes in policies were made?

In order to analyse policies changed in Australia in 2013, the policy situation (monopoly) of the cabinet of Gillard (2010-2013) is first explained. This is when important foundations for the protection of environment and, indirectly, for the GBR were laid. Two important policies, the Carbon tax and the Mineral Resource Rent Tax are here described. These two policies were under great attention in those years, and since climate change and coal are the biggest threat to the health of the reef (Hoegh-Guldberg, 2015), these two are applicable in the scope of this study. To analyse the policy change this chapter uses the empirical questions derived from the literature.

4.1.1. How can the “old” policy monopoly of the previous cabinet be identified?

From 1975, the Australian Government has been starting to implement policies regarding the protection of the Reef, policies that deal with the Reef itself, policies around climate change and policies around mining. The most important policies are describe in the appendix and are therefore not discussed in this paper. The two most relevant and recent policies that are discussed are the Carbon Tax and the Mineral Resource Rent Tax.

The Carbon Tax

Under the administration of the Rudd and Gillard Labour Federal Governments (2007-2013), Australia’s climate regulatory plan changed significantly. The Rudd government ratified the Kyoto Protocol in 2007, and Clean Energy legislation was passed by the Gillard government. This legislation was introduced a national carbon pricing mechanism which would regulate major greenhouse gas emitters by pricing them (Peel, 2014). This measurement is the most cost-effective core means of reducing global carbon emissions (OECD, 2013).

When trying to implement the first attempt of the Emission Trade System, the political turmoil that followed in the parliament ensured the replacement of Prime Minister Rudd and its Opposition Leader by their respective parties. The new Labour Party Leader, Julia Gillard won the elections in 2010 narrowly but it was able to form a coalition with the Australian Greens and de independents (Rourke, 2010). While she insisted not to implement a carbon tax (a fixed price to be imposed on carbon pollution), she reversed in this position as agreements were made with the Greens (West, 2013). Then, a multiparty process was established to consider the parameters for a new national climate policy.

The design was done with advice from the Garnaut Reviews (Garnaut, 2011), combined with an intensive expert- and public-consultation process. Garnauts reviews were very influential in the policy process (Peel, 2014), and therefore the problem framing of his report can be considered very important for that period of time. It said in the report that the absence of a global effort to reduce CO2 emissions, climate change would have severe adverse effects on Australian agriculture and on the natural environment. (Garnaut, 2011). His definition of a global effort was the ETS under which the carbon tax was established. Gillard introduced this instrument under the Clean Energy Plan in 2011 and the carbon price was brought into effect on 1 July 2012 (West, 2013).

The Mineral Resource Rent Tax

Australia successfully avoided the recession, however, the national economy was not without its problems. The mining boom has warped the Australian economy, driving the high price of the Australian dollar. Consequently, according to Paul Clearly (2011), undermining the viability of other export industries such as the higher education, manufacturing and agricultural sectors. Kevin Rudd announced in May 2010 as Prime Minister, that he would impose a 40 per cent tax on the 'super profits' of major mining corporations that profited of the mining boom (Cleary, 2011). The three biggest mining companies imposed a direct attack on the government through an advertising campaign. An "ad war" between the government and the mining interest began and the industries displeasure took centre stage in the reporting of national politics (McKnight & Hobbs, 2013). When he was replaced by Julia Gillard she announced her willingness to negotiate with the mining industry by stopping the government's own advertising campaign and a weaker tax, the Mineral Resource and Rent Tax, was agreed on. In March 2012 the tax passed the Senate and the government said it would help to spread the benefits of the mining boom to less well-off sectors of the economy. Former Opposition Leader Tony Abbott vowed in the 2013 elections to repeal the tax if he wins government (AAP, 2012).

Defining the problem (and the solution) in the cabinet made clear that Gillard had a policy monopoly. She saw climate change as a real threat and wanted a clear solution. Although she was strongly criticized by the opposition and the mining industry (AAP, 2012), she managed to get the Carbon Tax and Mineral Resource Rent Tax placed. She also introduced a special Climate Committee consisting of Labour, Greens and Independent members (Coorey, 2010).

4.2 The Shift

What were the underlying factors for the change in policy before the elections in 2013?

4.2.1. How did the policy entrepreneur manage to break through the window of opportunity?

The policy entrepreneur in this particular case is the current Premier of the Commonwealth of Australia: Tony Abbott. It is relevant to consider the background of Tony Abbott before there can be given an answer on how and why he managed to break through the window of opportunity.

Prior to the election of the coalition government on 7 September 2013, Tony Abbott had been Leader of the Opposition since 1 December 2009. He attracted in an early stage already criticism for missteps he made and was called a misogynist by former Labour Prime Minister Julia Gillard (BBC, 2015). As a leader of the opposition in 2009, Abbott earned several nicknames since he had such an aggressive approach in the parliament. He has been often an outspoken hard man of conservative politics and he wrote a book in 2009 offering a range of sometimes provocative policy ideas for the next coalition (O'Brien, 2009). He has always been rejecting the carbon pricing as a means to address the issue of climate change, but instead had a 'Direct Action' climate plan. He is now famous for his quotes on climate change f.e. stating: "Coal is good for humanity." (BrainyQuote, 2015)., "Science of climate change is highly contentious." and "Economics of an ETS is a big dodgy." (O'Brien, 2009).

It is known that Australia's fossil-fuel dependent economy has inhibited the government's ability to introduce emission reduction policies that conflicted with the established fossil-fuel interests and this has made action on climate change the subject of highly biased debates between Australia's major political parties (Crowley, 2010). The carbon pricing mechanism that emerged from the negotiations between the Gillard Government and the Greens was proven highly unpopular with the

electorate and Abbott had a very effective campaign conducted anticipating on the situation. He accusing Gillard of her 'broken promise' was an important factor in the shift (Peel & Osofky, 2015). Although many Australians continued to believe that climate change was real, a declining number of them saw this change as being a result of human activity. A strong correlation occurred between the political preference of that time (the opposition was strongly against the carbon tax) and belief in and attitude towards climate change. For example, poll conducted in July 2011 (when the federal parliament was debating on the carbon tax), found that 37 percent of respondents asked for their view of global warming believed "concerns are exaggerated" and 58 percent opposed the proposed carbon pricing mechanism (Roy Morgan Research, 2011).

With the elections in September 2013, Tony Abbott took his change and became the prime Minister. After more than six years of an political unstable situation "the voters wanted stability" and "Tony Abbott put up a unified team. It was the accumulative effect of those six years of disunity that was behind the idea it was time for a change." Said Labour candidate Peter Beattie (CNBC, 2013) Tony promised to cut the carbon tax to rein in government spending and scrap an unpopular tax carbon emissions.

4.2.2. What was the agenda-setting (attention) before the policy change?

Agenda setting: Media attention, framing the debate

The way in which the media represents issues influences news sources, and produces public opinion. The media can also ignore issues, making them invisible for the bigger audience, and the audience is then unable to support actions pro or against these issues (Bacon, 2011). The media had an important role in shift in policy.

The Australian Centre for Independent Journalism report written by professor Wendy Bacon (2011), analysed in 2011 for six months how ten Australian newspapers in mainstream corporate media covered the carbon tax. She discovered that the media displayed a very negative coverage of the Gillard Government's carbon policy across the ten newspapers with a coverage of 73%. The words that are used to describe certain issues influence the way of discussion. The carbon emission reduction policy was originally referred to as the carbon pricing policy, although from the beginning Opposition leader Tony Abbott referred to it as a 'tax'. Many newspapers used this word tax from Tony Abbott in their articles, displaying negative content. The negativity comes from the fact that climate change poses threat to the economic development of Australia and indirectly affect the newspapers. The report concludes that the reporting of climate change in sections of the Australian media has been far from impartial, fair or balanced (Bacon, 2011) .

A second research report of Wendy Bacon (2013) elaborates on the issue of attention on the coverage of climate science. The research is an addition to research papers that found that there is evidence that sections of the Australian media are promoting climate scepticism (McKewon, 2009; McKnight, 2010; Bacon & Nash, 2012 & 2013). It concluded that a large number of Australians received very little information through their mainstream print/online media of any kind about the finding of climate scientist of the sample period and that there was an overall decline in coverage between 2011 and 2012 (Bacon, 2013). Very significantly was the finding that nearly a third of all articles referencing climate science published by then Australian newspapers during three months in 2011 and 2012, did not accept the consensus scientific evidence that human beings are the main contributors to global warming (Bacon, 2013).

The mining industry started through the media an ad-war between 2009 and 2012, fiercely protesting against Labour policy changes. The first was in 2009 and was directed against the proposed

ETS. The second was against the Gillard government's carbon tax in 2011-2012. Since they had success in their campaigns Tony Abbott openly called on the mining industry to become 'political activist' for 'a couple of years' (Packham, 2011).

4.2.3. How can the new policy monopoly be identified?

The new policy monopoly of Tony Abbott can be identified by the different framing than the policy monopoly of Gillard. A fundamental problem according to Abbot with the carbon tax was that the single biggest commodity of Australia, coal, would be left in the ground and not sold. And about climate change: "Well really and truly, I can think of few things more damaging to our future." (Hannam, 2014). In his election campaign in 2013, Abbott also stated that the coalition wanted to "build a stronger economy so that everyone can get ahead.". He wanted to scrap the carbon tax, end the waste, and build the infrastructure and the roads of the 21st century (Clarke & Greene, 2013).

Climate change

Being the leader of the Opposition, Abbott always strongly opposed the climate change policy measurements of Gillard. He made the vows that he would repeal both the carbon tax policy and the mineral resource policy when he would be elected (Peel & Osofsky, 2015). Abbott appointed Greg Hunt as minister of Environment and in September 2013 Hunt abolished key ministerial positions of climate change and science including the advisory Climate Change Commission that Gillard had installed (Arup, 2013). In July 2014, Australia became the first country in the world to abolish the carbon tax. Abbott pleaded for his own environmental legislation: the "Direct Action" plan. "We are a government which absolutely appreciates that we have only got one planet and we should pass it on to our children and grandchildren in at least as good shape as we found it." Abbot said back then (Cox, 2014).

The Abbott Government's official public line is: "Climate change is real and serious". Analytics however have said Abbott's Direct Action was likely to fall several billions euros short of achieving the five percent cut in emissions by 2020 his government clings to. Another target for 2020 was to generate 20 percent of Australia's energy from renewable energy. Abbott placed Warburton as head of the review, a climate sceptics (Readfearn, 2014). Abbott also cut the Climate Change Authority, and the agency which was set up to drive the growth of renewable energy. As a result, Australia's investment in renewable energy declined with 88 percent in 2014 to the lowest level since 2002. They came also second worst out of 61 countries on the climate change performance index and the worst performing industrialised country (Hannam, 2015). According to principal consultant Hugh saddler, the arguments of Abbotts government are framed in terms of cost generation today, in which new-build renewable generators are compared with long ago depreciated legacy coal-fired generators. "Australia is almost unique in the world in combining an extremely emission-intensive electricity generation industry with a negligible commitment to transforming the industry towards a low-emission future." (Hannam, 2015).

The Federal Environment Department is not well off under Abbots rule. In April 2014 it was announced that nearly 500 jobs will be lost at the department over the next three years since the department faces cuts of 80 million euro over four years (ABC, 2014). In December 2014, Abbott Cuts the Climate Adaptation Outlook Independent Expert Group and in April 2015 3 million euro was funded for a new consensus centre with an appointed 'sceptical environmentalist' (Cox et al., 2015).

Non-renewable energy

In December 2013, Hunt approved plans to dredge three million cubic metres of seabed floor just of the coal port of Abbott Point (a port closely to the GBR), as well as the construction of four coal export

terminals, the building of a new coal seam gas refinery and a pipeline, and extended facilities to increase ship traffic through the coral-laden inner channel of the GBR (Fraser, 2013). Opponents say this will severely damage the GBR. Also the fossil fuel business receive more than 9 million euros per year in government subsidies, with the mining industry receiving the lion's share. The 2015 energy white paper (document that outlines the nation's energy vision for the short and long-term future) focuses mostly on the fossil fuels and the Abbott government concludes with the statement that: "ongoing access to large volumes of coal and gas will also underpin our energy generation mix for a few decades.", ignoring the future for renewable energy resources (Australian Government, 2015).

5. Conclusion

The purpose of this research was to provide an explanation on the causes of the policy shift in Australia in 2013. This has been done by the following research question:

What caused the shift of policies concerning the health of the Great Barrier Reef in Australia?

Two prominent theories about policy change have been used to generate an elementary methodological model to apply in the analysis section. Empirical questions were derived from the theories and by answering them, an explanation of the underlying reasons behind the policy shift could be provided.

It has been proven that the government of Australia had been unable to have unbiased debates on issues as climate change and the environment. However, years before the policy shift was characterized by the willingness to implement policies in favour of the environment and to stop the global climate change. Prime minister Gillard had a strong policy monopoly and despite the strong critiques of the Opposition, she managed to get the Carbon Tax and Mineral Resource Rent implemented.

Tony Abbott can be clearly seen as the policy entrepreneur, and he acted as one. An important moment in the shift was his accusation of Gillard's broken promise which put her in a bad light with the voters. This put him in a better position for the elections. Since he was a strong climate scepticism, a relation was noticed in the political preference of the voter combined with climate change, which became more climate sceptic against the carbon tax while voting for Abbott.

Furthermore there is investigated that the media in the period of Gillard, was very negative on the carbon price policy, promoted climate scepticism and even a third of all articles that referred to climate science did not accept the fact that human beings are contributors to climate change. Also the mining industry started an 'ad war' which was promoted by the Opposition, Tony Abbot. The media was used as a tool for the mining industry to infiltrate into the policy process and influence this process in their advantage. Also, media was influencing the greater audience, which might have shaped it towards a negative attitude towards the carbon tax (which Tony Abbott would abandon right after he would be chosen) and towards climate change science (which Tony Abbott is sceptical about). Also it was lacking to inform the audience on the new developments in the field of climate change investigation.

Abbott's government is on a new policy direction. The reasons they managed to get on this road are investigated and it is clear that the policy entrepreneur Tony Abbott was very good at breaking through the window of opportunity with the elections, and that the media helped him gain his power by being very sceptic on climate change as well. This is a bad prospect for the future health of the reef, and people should consider that this process could happen with the next elections. After knowing this, would they vote for Abbott again?

6. Discussion

This research combined two prominent but extensive theories about policy change. Since both of the theories have no clear methodology on how to investigate policy change, it is decided to combine two theories to make them more complementary. This is done at a rather simple manner to get to understand the basics on the policy shift. The model that is derived from the two theories is in an analytical sense not perfect and the chosen casus is not discussed comprehensive enough to test it to the fullest. I recommend therefore that in further analysis on political policy changes that the combining of the theories is more developed and that a general method can be made that is applicable for analysing policy changes.

Two remarks about the objectivity of this paper have to be made. First, this research paper is written by a student with a background in Environmental Studies. This could bias the way in which the paper is written, since it is for example automatically negatively expressed in the paper that someone is pro-economic growth and against the environment. Secondly, many newspaper articles have been used to analyse the process, and this could also influence the quality of the research in a negative way, since not all newspapers are objective sources.

“Something is rotten in the state of Australia and that something is the disproportionate influence of the fossil fuel industry and climate change sceptics over government in Australia”

Professor R. Lyster, Climate and Environmental Law at University of Sydney

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8. Appendix

Great Barrier Reef policy

In 1975 the most important Act for the Great Barrier Reef was established. This was the Great Barrier Reef Marine Park Act (GBRMPA) (1975). With the act, came the establishment of the Great Barrier Marine Park, and the Great Barrier Reef Marine Park Authority. The Authority would become responsible for the management of the Marine Park. The Act provided the Authority with a planning and management framework, investigation regime, and enforcement mechanism for the Marine park. In the Appendix a historic overview is given of the beginning years of the establishment of the Great Barrier Reef Marine Park, and the leading causes for the establishment of it.

From 1975 onwards, the GBRMP has been subject to an intensive management which focussed on managed use and ecosystem protection. The human use impacts from which it had to be protected against include tourism, recreation, shipping, farm and urban pollutant runoff from the adjacent land, fishing and hunting and climate change related environmental change (Lebel et al, 2006).

Many policies and policy plans have been written in addition to the Great Barrier Reef Marine Park Act. In 1983 the Great Barrier Reef Marine Park Regulations were made which were the primary regulations in force under the Great Barrier Reef Marine Park Act. In 1994 the 25-year Strategic Plan was set to outline strategies for management and preservation of the Park which became a World Heritage Area in 1981. The National Government created in 1999 official legislation for the protection of the environment: The Environmental Protection and Biodiversity Conservation Act (EPBCA). The Act regulates actions that will or are likely to have a significant impact on the important pieces of environment.

In the new millennium new acts and plans were added to the list. These were: The Great Barrier Reef Marine Park Aquaculture in 2000 which regulated the discharge of waste into the reef, and the Great Barrier Reef Zoning Plan in 2003 which still counts as the primary planning instrument for the conservation and management of the Marine Park by means of zoning the reef. In addition came the Reef Water Quality Protection Plan in 2003 (which would be amended in 2009 and 2013) to provide a collaborative program of coordinated projects and partnerships designed to improve the quality of water in the GBR.

In 2007 the GBRMPA was amended by a new Act. Whereby a five-yearly, peer-reviewed 'Outlook Report' documents the overall condition of the reef and locked down zoning plans for seven years to create stability. In 2008 another amended act passed the Parliament which put in place a modern, future-focused regulatory framework to secure the long-term protection and ecologically sustainable management of the reef.

A summary of the most important policies are displayed in the following table.

Policy measures	Implementation period	Description
1. Great Barrier Marine Park Act 1975	1975	This is the primary and most important Act in respect of the Great Barrier Reef Marine park. It establishes the Great Barrier Reef Marine Park, The Great Barrier Reef Marine Park Authority, a commonwealth Authority responsible for the management of the Marine Park.

		Furthermore it provides a planning and management framework of the Marine Park. It prohibits mining operations in the GBR region, provides an investigation regime, and enforcement mechanisms including criminal actions, civil penalties, administration action etc.
2. Great Barrier Marine Park Regulations	1983- amended in 2009	These are the primary regulations in force under the <i>Great Barrier Reef Marine Park Act 1975</i> . Included are a number of offence provisions, in addition to provisions relating to applications for and the granting of permissions, compulsory pilotage, Environmental Management Charge, plans of management, and review rights.
3. 25-Year Strategic Plan	1994	The plan outlines strategies for managing and preserving the Great Barrier Reef World Heritage Area, and provides the basis to ensure wise use and protection of the Great Barrier Reef World Heritage Area for the future
4. Environmental Conservation and Protection Act	2000	This act regulates actions that will or are likely to have a significant impact on matter of national environmental importance.
5. Great Barrier Reef Marine Park Aquaculture	2000	This Act was made to regulate the discharge of waste from aquaculture operations which may affect animals and plants in the Great Barrier Reef Marine Park.
6. Great Barrier Reef Zoning Plan	2003	This is the primary planning instrument for the conservation and management of the Marine Park. In having regard to the objects set out in the <i>Great Barrier Reef Marine Park Act 1975</i> , the zoning plan takes the World Heritage values of the Park and the principles of ecologically sustainable use into account. The Plan aims, together with other management mechanisms, to conserve the biodiversity of the Great Barrier Reef ecosystem within a network of highly protected zones, and give opportunities for the ecologically sustainable use of the Reef and access to the Great Barrier Reef

		Region by current and future generations.
<i>7. Great Barrier Reef Marine Park Amendment Act 2007</i>	2007	This Act amended the governance, accountability and transparency requirements of the Great Barrier Reef Marine Park Act 1975. In particular, the amendments provided for: a five-yearly, peer-reviewed 'Outlook Report' to document the overall condition of the marine park to be tabled in Parliament and published, an enhanced process to engage stakeholders in the development of zoning plans for the marine park and finally it “locked down” zoning plans for a minimum of seven years from the date they come into force.
<i>8. Great Barrier Reef Marine Park and Other Legislation Amendment Act</i>	2008	A second amendment Act - the <i>Great Barrier Reef Marine Park and Other Legislation Amendment Act 2008</i> - was passed by Parliament on 12 November 2008. The Act put in place a modern, future-focused regulatory framework to secure the long-term protection and ecologically sustainable management of the reef.
9. Reef Water Quality Protection Plan	2003 amended 2009-2013	This plan provides a collaborative program of coordinated projects and partnerships designed to improve the quality of water in the Great Barrier Reef through improved land management in reef catchments.
10. Reef 2050 Long-term Sustainability Plan	2015	The Reef 2050 Plan responds to the World Heritage Committee’s recommendation that Australia had to develop a long-term plan for sustainable development to protect the Outstanding Universal Value of the Reef.

Table 1. Summary of the most important policies of the GBR

Mining policy

In the case of mining, the power to legislate for minerals is with the separate states of Australia. This is why we look in the case of mining to the specific legislation that exists for mining in the State of Queensland.

In the state of Queensland, the environmental management of mining is largely regulated by the Environmental Protection Act 1994 and administered by the Department of Environment and Resource Management. Under the Act, a holder of a mining tenement must obtain an environmental authority before he can carry out any mining activities on the tenement. Furthermore, the most important act concerning the mining itself is the Mineral Resources Act in 1999. The purpose of this Act is to support and promote responsible mineral resource management consistent with sustainable development while it recognises the following goals: providing a framework for efficient and effective mineral rights administration, encouraging, promoting and facilitating mineral exploration, development and production, providing a fair royalty regime, and improving the knowledge of mineral resources in the Province (Commonwealth of Australia, 1990). This act is modified to the Mineral Resource Regulation in 2013.

Climate change policy

The changing climate change policy of Australia has been documented extensively by Anita Talberg, Simeon Hui and Kate Loynes (2013) in one of the research paper series conducted for the Australian government. It is chronologically displayed when governmental changes have happened, and put into an international context. The highlights of this research are used in this section to give a small overview on the climate change policy in Australia.

In 1998 the Australian Government established the Australian Greenhouse Office, which became the first governmental agency in the world that would be dedicated to decreasing greenhouse gas emissions. In that same year, Australia signed the Kyoto protocol, along with 20 other countries. It does however not ratify the protocol, so it is in the case of Australia not legally binding. In the new millennium, the Renewable Energy Act in 2000 was established under which the Mandatory Renewable Energy Target Scheme started. It mandated that by 2010 electricity retailers and other large electricity buyers source added an additional 2% of their electricity from renewable energy sources. In 2005 Australia's emission intensity is one of the highest in the world and it was advised to design a Emissions Trading Scheme (ETS). In 2007 a Department of Climate Change is established within the Prime Minister and Cabinet portfolio. Also the Kyoto protocol was ratified by prime minister Kevin Rudd. In 2011 the Renewable Energy Amendment Act 2010 comes into force. In 2011 the government launches the Climate Commission. After years of negotiation about the ETS, in 2011 the Clean Energy Act 2011 is passed by the parliament. This is a package of 18 Bills that provides the framework for an ETS starting with a three-year-fixed price phase.

More background

The Great Barrier Reef vs. the mining industry

The oil and coal industry have been in conflict with the Great Barrier Reef for over a long period of time. It has been the leading cause for the development of the extensive management of the Great Barrier Reef (Daley, 2014). When oil drilling began in the GBR region in 1959 with the Humber Barrier Reef well and with an application to mine Elision Reef in 1967, development pressures in and around the reef increased. The plans faced opposition of many trade unions in 1969, which helped to suspend plans for

further drilling. The events were the catalyser of significant environmental protest in Australia and in 1969 a Save the Reef Committee is formed. The discharging of 1000 tonnes of oil in the Torres Strait in 1970, raised even further concern over adequate protection of the GBR region (Daley, 2014). The accident highlighted the lack of contingency planning for incidents on the Reef (Wright, 2001). Commonwealth and Queensland Royal Commissions were then formed to examine proposed petroleum exploration on the Great Barrier Reef.

In 1975 the Federal Parliament passed the Great Barrier Reef Marine Park Act, which was promoted by the Great Barrier Reef Committee. The Act provides for the establishment and management of the GBRMP within a described area and banned all forms of oil drilling and mining within the boundaries of the Marine Park (Brodie & Waterhouse, 2012). The Act also established a single management agency, the Great Barrier Reef Marine Park Authority, which was needed to co-ordinate management (zoning plans) and for research on the Reef (Scovazzi, 1999). The Authorities brief was straightforward: *“to provide for the protection of the reef in perpetuity, while allowing for reasonable sustainable activities by those who used and its resources”*. Commonwealth jurisdiction was after that moment applicable to manage the park (Commonwealth of Australia, 1975). A joint Australian and Queensland State Governments plan was then set up for an active collaboration in managing the Act.

In 1979 the Emerald Agreement established the primary framework for management of the Reef. This is a joint agreement between Commonwealth and Queensland Governments signed by the Prime Minister Malcolm Fraser and premier Joh Bjelke-Petersen (Wright 2001). A few years later, in 1981, this was followed by another benchmark in the legislation of the GBRMP: the approval of the World Heritage Committee of the nomination of the Great Barrier Reef. This was at the time furiously opposed by the coalition government of Bjelke-Petersen who had intended to do exploratory mining on the reef for oil (AAP, 2011). The declaration meant that an area which was based on the Great Barrier Reef Region became inscribed as World Heritage under the UNESCO Convention protecting World Cultural and National Heritage sites. It was inscribed on the list on the basis of its outstanding natural, cultural and historical features and its integrity as a self-perpetuating ecological system (UNESCO, 2015).