

Political culture, Governance and Climate Change Adaptation: Case study of South Korea

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Abstract

Many scholars highlight the essence of a participatory governance approach to climate change adaptation and the positive impact of allowing multiple actors participation in the process of decision making as a determinant for successful adaptation to climate change. However, political culture in some societies does not support participation, and people are neither interested nor even aware of political actions. There are very few studies carried out that examine cultural, especially political cultural, influences over governing climate change adaptation. In response to this academic gap, this research aims to investigate how political culture influences a governance approach to climate change adaptation. Using an empirical case study of the process of formulating national climate change adaptation policies in South Korea, this study examines the way decisions are made about climate change policies under 'dominant bureaucratic', 'authoritarian' and 'weak participant' political cultures and investigates how such political cultures will hamper or encourage a governance approach to effective climate change adaptation. This study therefore advances knowledge about how political culture influences climate change adaptation. It provides a basis for comparative analyses of other political cultures in different regions and will enable scholars to understand the challenges that particular forms of governance hold for promoting climate change adaptation.

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List of Acronyms

ACC Programme	Adapting to Climate Change Programme
AF	Adaptation Fund
AR	Assessment Report
CCC	Committee for Climate Change Adaptation
CDM	Clean Development Mechanism
COP	Conference of the Parties
CSO	Civil Society Organisation
DASH Board	Delivery and Strategy High-level Board
DEFRA	Department for Environment, Food, and Rural Affairs
FALG	Framework Acts on Low carbon, Green growth
IPCC	Interdepartmental Panel for Climate Change
KACCC	Korean Adaptation Center for Climate Change
KMA	Korea Meteorological Administration
KTO	Korea Tourism Organisation
LRAP	Local and Regional Adaptation Partnership
MOE	Ministry of Environment
MOPAS	Ministry of Public Administration and Safety
MIFFAF	Ministry of Agriculture, Food, Fishery and Forestry
MLTM	Ministry of Land, Transportation and Maritime
NCCAM	National Climate Change Adaptation Measures (2011~2015)
NIER	National Institute of Environment Research
NIMR	National Institute of Meteorological Research
NGO	Non-Governmental Organisation
PCGG	Presidential Committee on Green Growth
SRES	Special Report on Emission Scenarios
TAR	Third Assessment Report
UKCIP	United Kingdom Climate Impacts Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNDP	United Nation Development Programme
WB	World Bank

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Forward

The global community recognises the anthropogenic responsibility for climate change and collects opinions on how to reduce emission using the Kyoto mechanisms. The main instrument of the Kyoto Protocol is to mitigate climate change by using market mechanisms (Kane and Shogren 2000; UNFCCC 1998). However, mitigation of climate change using market mechanisms does not take into consideration the developing countries where people are very vulnerable to climate change adaptation (Cameron 2012). Instead the Kyoto project developers are mainly interested in making profits from the market mechanisms. Although the Kyoto protocol is equipped with an adaption fund which is prepared to help developing countries to adapt to climate change, the main goal of project developers is making profit from selling emission reduction credits. And the Protocol Article 12 notifies that Clean Development Mechanism projects should be used for helping vulnerable developing countries to cope with adaptation (Paavola and Adger 2006; UNFCCC 1998), but the reality was different. As a CDM project developer, I observed vulnerable people who were influenced by climate change but they were not actually protected under the Kyoto mechanism. If the intention of the Kyoto protocol is to reduce harmful anthropogenic influences on climate change and to make the earth a sustainable planet, then climate change adaptation should be taken more seriously in the protocol.

Poor environments in developing countries, where most projects using the CDM have taken place, made me think more about the lives of vulnerable people in the region and lead me to seek to do research about climate change adaptation from the perspective of governance. Climate change adaptation is better able to provide safe environments for the vulnerable and poor communities than mitigation using the Kyoto mechanisms. Poor communities adapt to the changing environment in their own ways but these adaptations often end up as maladaptation and make their lives more vulnerable to other changes in the environment. Poor local capacity to cope with climate change makes it imperative that help is provided by the government or global organisations.

Although local communities need support from upper-level governing organisations, the process of decision-making regarding local adaptation policies should include the public across multiple sectors and levels –if there is to be the effective delivery of adaptation strategies. However the rules of including non-governmental actors in the process of decision-making are not able to be applied to the local situation, because of weak capacity. This could be dilemma in governance approach to climate change adaptation.

My personal experience as a Clean Development Mechanism (CDM) project developer, an interest in climate change adaptations of vulnerable social groups made me do research on the insight into the consequences of political structures and cultures for climate change adaptation policy and examine the reasons why some societies does not accept participatory governance mode in the decision making about climate change adaptations.

Chapter 1. Introduction

“Adaptation will be necessary to address impact resulting from the warming which is already unavoidable due to past emissions (IPCC 2007a, p.25)”

1.1. Background to the research

In 2002, the eastern part of South Korea was battered by a big typhoon, the first in 100 years; the cost of the accompanying damage was estimated to be as much as USD 5,094.9 million. In 2010, the middle of Seoul, the capital city of South Korea, experienced a big flash flood caused by sudden torrential rain which fell for only two days from 21st to 22nd September. The damage inflicted was tremendous. Such frequent extreme weather events posed by climate change have been occurring with increasing frequency and severity not only in South Korea but also in other regions around the globe.

Climate is usually defined as the average weather over 30 years (IPCC 2007b). Any change in climate over time, whether due to natural variability or as a result of human activity, is defined as climate change (ibid, p.877). It is widely recognized that climate change is exacerbated by the increase of greenhouse gas emission caused by human behaviour (Fussel 2009, pp.16-18; Ford and Berrang-Ford 2011; Adger et al. 2007; Parry et al. 2008). The Interdepartmental Panel for Climate Change (IPCC) Assessment Report 4 (AR4) concluded that climate change is obvious, and human behaviour has exacerbated the meteorological phenomena (Adger et al. 2007). According to this report, the global temperature has increased 0.74 degrees Celsius over the past 100 years (1906~2005), and for the last 50 years the global warming trend has been twice as fast that of the previous 50 years. As temperature and precipitation changes, the frequency of floods, droughts, and heat waves has increased owing to the change in water circulation. This change makes people experience these adverse conditions; for example, they have to leave their familiar living environment to find food or shelter; this may be caused by extreme droughts,

floods or sea level rise (Ibid). Small island countries such as Tuvalu and Fiji are especially influenced by sea level rise exacerbated by climate change (IPCC 2007a, p.12; Lata and Nunn 2012).

In comparison to global climate change, South Korea has experienced more serious changes in particular ways: it has experienced more extreme weather events; for example, the number of days of torrential summer events (defined as more than 80 mm of rain per day) has increased from an approximate annual average of 5 events over the period 1940~1970 to an annual average of 8 events over the period 1980~1999 (Myeong et al. 2010). On the Korean peninsula the surface air temperature has been increasing significantly over the past hundred years (1904~2006) (Ho and Yun 2010; NIMR 2009). Average annual mean temperature increased 1.5 degrees Celsius during that time, which appears to be twice as much as the average global temperature increases (NIMR 2009). The yearly precipitation pattern has changed as well; the annual mean precipitation has increased, precipitation has increased by 5.6% when compared to precipitation in the 1970s, with the total number of rain days decreasing; this has resulted in an increase in rainfall intensity (Ho and Yun 2010). Increases of global temperature in the ocean causes seawater to expand and glaciers to melt, contributing to sea level rise (IPCC 2007b, pp.16-18). The sea level on the shores of the Korean Peninsula has risen by 1.9mm per year for the period 1962 to 2006 along with the increase of ocean surface temperature (NIMR 2009). Table 1 compares global climate change with that of South Korea.

Table 1: Comparison of global climate change with South Korea (Source: IPCC 2007b, p.238 for Global data and NCCAM for Korean data)

Region	Annual Mean temperature (oC) (1912~2008)	Sea surface temperature (1968~2008)	Sea level rise (1964~2006)		Annual mean precipitation	
Global	+ 0.74	+ 0.5	1.8±0.5mm/yr (1961~2003)	3.1±0.7mm/yr (1993~2003)	Increase over land north of 30°N (1999~2005)	Decrease in the tropical region since 1970s

South Korea	+ 1.7	+ 1.31	+ 8cm	+5.6% (1971~2008)
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According to the IPCC report regarding global climate projections which used simulation models, global mean surface temperature will increase throughout the 21st century with accompanying more intense, more frequent and longer lasting heat waves (IPCC 2007b, p.750). Some regions are likely to experience decreased frost days in winter. The pattern of climate change is uncertain but the frequency of extreme weather events will increase (Planton et al. 2008). Global averaged mean precipitation, and the intensity of precipitation events, will increase with some variation regionally (IPCC 2007b, p.750). The results of simulations using the IPCC Special Report on Emission Scenario (A1B)¹ for South Korea, show that the trend of climate variation will continue until the end of this century; annual air temperature will increase by 4 degrees Celsius and the precipitation by 17% compared to the year 2008; surface water temperature in the ocean will increase by 2 degrees Celsius and the sea level will rise by 20.9 centimetres on average around the Korean peninsula (NIMR 2009; Jeon 2010a). As temperatures increase, South Korea will tend to have shorter winters, or in the worst case scenario, no winter at all (ibid). The projection for South Korea shows that the meteorological phenomena caused by climate change will be more intense than global trends.

Table 2: Prediction using IPCC A1B Scenario (Source: Global data from IPCC 2007b and Korean data from NCCAM or Jeon 2010a)

Classification	2050		2100	
	Annual mean temperature (Base period: 1980 to 1999)	Sea level rise (Base year: 2008)	Annual mean temperature (Base period: 1980 to 1999)	Sea level rise
Global	+1.8	17cm	+2.7	+21~48cm
South Korea	+2.0	+9.5 cm	+4.2	+20.9 cm

¹ A1B: In the A1 scenario: a future world of very rapid economic growth, global population that peaks mid-century and declines thereafter, and rapid introduction of new and more efficient technologies. Major underlying themes are economic and cultural convergence and capacity building, with a substantial reduction in regional differences in per capita income. A1B is an alternative with technical change in the energy system with a balance across all sources. In A2 scenario: a differentiated world. The underlying theme is self-reliance and preservation of local identities. Fertility patterns across regions converge very slowly, resulting in continuously increasing population. Economic development is primarily regionally oriented, and per capita economic growth and technological change are fragmented and slower than other storylines.

The change will result in seasonal imbalances of water resources and impact on marine and terrestrial ecosystems (Ho and Yun 2010; Met-Office 2010). (NIMR 2009; Ho and Yun 2010). More frequent heat waves in summer will increase demand for electricity and negatively affect human well-being, too (Choi et al. 2010; Bele et al. 2011). It is argued that although we have reduced greenhouse gas emissions through mitigation actions, these trends in climate change and global warming will continue at least until the end of this century (Adger et al. 2007; Fussel 2009). These facts, make climate change adaptation imperative and essential for the globe (Adger and Barnett 2009; Smit et al. 2008; Ford and Berrang-Ford 2011; Parry et al. 2008; Parry et al. 1998; Burton 1997).

Human reactions to climate change are generally classified into two major categories: mitigation through reducing greenhouse gas emissions, and adaptation to the changes posed by the climate. However hard may the global communities take actions to stabilise the concentration of greenhouse gases in the atmosphere using voluntary and compulsory emission reductions, while this research has been under way, the level of global emission of greenhouse gases has increased. According to a report of the World Meteorological Organization (WMO Press release 20 November 2012), the world hit a new record of emissions increasing 38% in 2011 from the level of 1990 (WMO 2012). Even if we succeeded in cutting off emissions of greenhouse gases, climate change would influence our lives for more than 100 years because climate change continues under the influence of existing emission (Adger et al. 2007). When this fact is taken on board, it becomes clear that adapting to the changing climate is critical and essential. Adaptation has been treated as a passive reaction and has received less attention than mitigation (VijayaVenkataRaman et al. 2012; Smit et al. 1999; Paavola and Adger 2006). But these two reactions to climate change are not adversarial rather are they compatible, together they reduce negative impacts posed by climate change (Klein et al. 2007; Biesbroek et al. 2009; Ayers and Huq 2009). Mitigation and adaptation work synergistically. If we ignore mitigation and only concern ourselves with adaptation, then the impact of climate change will be tremendously (IPCC 2000). Adapting to climate change has been treated as a passive and coward reaction (Saroar and Routray 2012). However, without taking appropriate and timely adaptation measures, the adverse impacts posed by climate change will be exacerbated

(Wolf 2011). Adaptation generally refers to the social and ecological adjustment of systems in response to environmental change. The United Nations Framework Convention on Climate Change encourages countries to undertake adaptation and mitigation action in parallel over the same period of time, stating that 'all the parties shall make national climate change adaptation strategies' (Article 4.1 of the UNFCCC). The uncertainty and complexity of the impacts of climate change or variability has been used as an excuse or pretext by decision makers for hesitancy in taking action to cope with the impacts (Falaleeva et al. 2011).

Some scholars argue that making climate resilient and transformational societies can be a goal of climate change adaptation (Nelson 2011; Picketts et al. 2012; Pelling and Manuel-Navarrete 2011). As an ecosystem persists in the face of changes or disturbances with good flexibility to the changes (Holling 1973), human society can be more flexible and adjustable to the unexpected changes (Pelling 2011). Thus making a resilient system is often recognised as the goal of adapting to environmental changes (Gunderson and Allen 2009; Adger et al. 2011).

Adaptation

Before discussing the goal of climate change adaptation, I will explore concepts of climate change adaptation focusing in more detail on the governance perspective. Adaptation here refers to the social and ecological adjustment of systems in response to environmental change. Climate change adaptation aims to secure socio-economic and natural systems making them safe from the danger of climate change as well as the stimuli of climate change. It has been defined variously in accordance with differing goals and views. It is argued that successful climate adaptation is initiated by determining the concrete targets for climate change adaptation to achieve (Berrang-Ford et al. 2011; Parry et al. 1998). Therefore it is meaningful to explore different definitions of climate change adaptation and to determine which of these will be applied to this research.

Different scholars define adaptation to climate change in different ways in their literature (Adger et al. 2007; Smit and Wandel 2006; Smit and Pilifosova 2003). Among them, a generally accepted definition is that used by the IPCC, where climate change adaptation refers to the actions that people take in response to, or in anticipation of, projected or actual changes or variability in climate, to reduce or eliminate adverse impacts or to take advantage of the opportunities created by climate change (Adger et al. 2007). When we take timely and proper adaptation measures, the impacts can be substantially and successfully reduced or avoided (Klein et al. 2007). Climate change adaptation is not simply to reduce the adverse impact posed by climate change but also to utilise opportunities generated by the change (Fussel 2007), as climate change may provide opportunities in some systems. The fact that climate change may create negative impact as well as positive outcomes cannot be denied. That is the sense in which it is also used by the South Korean academic community, and this is the concept of the IPCC. It is adopted for this research for it refers to climate change adaptation in a broad way, including natural and human systems responses to actual and expected climate stimuli and their impact, which reduces harmful effects or takes advantage of benefits posed by the change (IPCC 2007a, p.869).

Adaptation to climate change is often interpreted as a series of planned, purposeful, intentional and strategic policies (Adger et al. 2005a; Adger et al. 2009b; Smit et al. 1999), however, it can also include autonomous or spontaneous adaptation by individuals or local communities. There are some who are sceptical of such autonomous adaptation measures for the reason that they are likely to become mal-adaptations or produce unexpected outcomes (EC 2009, p.7; Mcbean 2011; Fussel 2007; Cash et al. 2006). Moreover, some critics are of the opinion that autonomous adaptations sometimes are not sufficient to reduce vulnerability or to improve adaptive capacity in the system. In contrast, planned adaptations are usually undertaken by public organisations to meet the needs of stakeholders (Smit and Pilifosova 2003). There are some other attributes used for conceptualising adaptations by international organisation which work for facilitating climate change adaptation. These are summarised in Box 1-1.

Box 1-1: Examples of conceptualizing adaptation in international institutions
(Source: Adopted from the respective references)

Source	Definition
IPCC (2001)	Adjusting the activities of natural or human systems to climate stimuli or the effects of the stimuli which are actually happening or expected to take place. It refers to changes in processes, practices, or structures to moderate or offset potential damages or to take advantage of opportunities associated with changes in climate.
UNDP (2005)	Process of mitigating the results of climate change and developing, enhancing, and implementing coping strategies.
UNFCCC (2012)	Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
World Bank (Webpage of World Bank)	The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects. Adaptation can be carried out in response to (ex post) or in anticipation of (ex ante) changes in climatic conditions.
UKCIP (2003)	The process of reducing losses and damages related to climate change and the risk associated with the damage; and determining the benefits or the results of the processes that affect future climate conditions.

The concepts of climate change adaptation were formulated by the international organisations which are known to be advanced in addressing climate change adaptation. For example the Interdepartmental Panel for Climate Change (IPCC), the United Nations Development Programme (UNDP), the United Kingdom Climate Impact Programme (UKCIP), and the United Nations Frameworks Convention on Climate Change (UNFCCC) are acknowledged as having worked actively on climate change adaptations. The IPCC Third Assessment Report (TAR) (2001) refers to adaptation as the adjustment of nature and human systems against climate stimuli and the stimulating effect of climate, while the definition of the UNDP (2005) is more concrete and practical (IPCC 2001). The UNDP uses the terms mitigation, coping, and utilization as the concrete forms of adjusting activities to address climate change (UNDP 2005).

The UN Framework Convention on Climate Change (UNFCCC) established an overall framework for interdepartmental efforts to reduce the risks posed by climate change, and recognized that the stability of climate systems can be affected by emission of greenhouse gases caused by industrial and other emissions (UNFCCC 2012). It identified adaptation as one of the five key building blocks of a future climate change deal. In order to support developing countries which will be vulnerable to climate change; the UNFCCC established 'the Adaptation Fund' in 2001 in order to finance adaptation projects and programmes in developing countries (AF 2011). In Paragraph (e) and (f) of Article 4 (Commitments) of the UNFCCC, it recommends that all the parties which ratified the Convention shall cooperate for adaptation to the impact of climate change by suggesting specific and practical examples of adaptation measures; for example: developing plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas affected by droughts and

floods. The United Kingdom Climate Impact Programme (UKCIP), on the other hand, uses the concept of risk management approaches to climate change adaptations. It refers to adaptation as a process, or outcome of the process, that leads to a reduction in impact; the risks posed by climate variability and climate change. For the purpose of effective implementation of adaptation, the UKCIP divides adaptation into three steps: recognition of risks associated with climate change; decision-making regarding management of the risks; and utilizing the opportunities (UKCIP 2004). The World Bank combines three of these institutions' definitions: the UNDP (2005), the UKCIP (2003) and the IPCC (2001) and refers to climate change adaptation as adjustment in natural or human systems responding to actual or expected climatic stimuli or their effects (WB 2012). Thus, adaptation can be responsive or anticipatory measures and behaviours to prevent, moderate, cope with and take advantage of, the influences of climate events in accordance with the objectives of actions or research.

Adaptive capacity

Some systems are able to adapt while others are not. The ability of the system to adjust to changes is referred to as adaptive capacity, which is the potential capability, or ability of a system to adapt to climate stimuli or the impact posed by climate change (Smit and Pilifosova 2003; Klein et al. 2007; Engle and Lemos 2010). In addition, adaptive capacity includes the ability to move the threshold of adaptation and expand the coping range of adaptations (Klein et al. 2007). Adaptation to climate change is determined by a combination of many factors including non-climatic attributes; for example, socio-economic resources such as human capital, information, social capital, political capital, and the capacity of institutions, and physical and material resources: technology, natural resources and infrastructure, the accessibility of new technologies, social and economic development, people's willingness to change their behaviours, networks and social capital, governance structures and the degree of institutional capacity are all factors that influence the degree of adaptive capacity of communities or nations (Smit and Pilifosova 2003; Berkhout 2005; Adger et al. 2003; Klein et al. 2007; Engle and Lemos 2010). Thus the adaptive capacity is multi-dimensional and determined by aggregated interaction between numerous factors (Vincent 2007; Brooks et al. 2005). The determinants of adaptive capacity work slightly differently depending on the conditions of a society (Engle 2010; Adger and Vincent 2005; O'Brien et al. 2009).

Successful adaptation

What we want to achieve by adapting to climate change is determined variously within societies or sectors. Some societies set up the goal of returning to status quo through adapting to the environmental changes and returning back to the same condition before the changes occurred; others attempt to achieve economic development while adapting to climate change (Adger and Barnett 2009). Generally speaking, achieving the goals through adaptation actions can be defined as reaching successful adaptation. However, conceptualising 'successful' adaptation does not simply refer to the effectiveness of meeting the determined goals (Adger et al. 2005b). Successful adaptation is diversely conceptualised as much as 'success' is defined differently from individual to individual and from society to society according to the values of the people. Also, the determination of successful adaptation can change spatially and temporally (Adger et al. 2005b). Sometimes short-term adaptation could lead to long-term vulnerability to climate change (Doria et al. 2009; Lahdelma et al. 2000). Moreover, when adaptation actions focus on one particular risk in a certain group in a society, the others in the region or other aspects of the social system may be made more vulnerable to different impacts or unpredicted risks (Cannon and Muller-Mahn 2010; Nelson et al. 2007). Therefore, taking into account the long-term effects or unexpected side-effects, some scholars argue that flexibility or resilience to climate change should be added to the criteria for evaluating the success of adaptation (Brooks et al. 2011, p.14).

There are some suggestions for ways to increase the possibility of making successful adaptations; by increasing the number of options for adaptation and improving adaptive capacity of the systems (Fazey et al. 2010). Successful adaptation begins with deciding the appropriate adaptations for the system. In order to increase options for adapting to climate change, it is necessary to explore what people want to achieve through the adaptation, what impacts are likely to occur, and how much the society will be influenced by the impacts. For this process, multiple actors from diverse areas collect opinions and provide knowledge, because a variety of actors across multilevel sectors can produce more alternatives and better methods of implementation. In addition, climate change is so complex and dynamic that it is difficult for any single actor to provide proper ways to cope with it. Hence, for more effective policy implementation, decision makers within and beyond the state are encouraged to

share their powers and information. (Folke et al. 2005). So-called *governance approaches* to climate change adaptation *may* lead to more effective delivery of adaptation measures (Tompkins and Adger 2005; Bulkeley and Betsill 2005; Gustavsson et al. 2009; Adger et al. 2009b). The detailed advantages of adopting governance technologies to climate change adaptation will be discussed in Chapter 2.

Another method of improving effectiveness in adaptations is to build up the adaptive capacity of a system. This generally leads a society to achieve successful adaptation to climate change (Klein et al. 2007). However, O'Brien (2009) argues, citing empirical research in Norwegian's flood management that a high level of determinants of capacity for adaptation does not always lead to successful adaptation. Although a society establishes a high level of adaptive capacity, it does not necessarily succeed in adapting to climate impacts (O'Brien et al. 2006; O'Brien 2009). Values also contribute to the probability of successful adaptation (O'Brien 2009). The values in a society are critical factors in deciding whether the adaptation actions are counted as success or failure. Climate change adaptation requires multiple actors from diverse sectors at different scales. In order to deliver effective and successful adaptation policies, it is necessary to determine whose values are most affected and how these can be secured from the risks of climate change (Adger et al. 2009a). Social norms and the ownership of values should be accounted as the essential determinants of successful adaptation (Eriksen and Kelly 2007).

As discussed, there are many factors encouraging or hampering the taking of adaptation actions. Among these factors, Adger et al. (2009) classify essential elements into three types: system thresholds which refers to a point for a system from which it starts to take adaptive actions or to hold them when the system reaches beyond its capacity; individual and cultural values in a society; and institutions and governances (Adger et al. 2009b, p.2). Therefore, defining and evaluating successful adaptation cannot be handled in a simplistic fashion.

Due to the uncertain and unpredictable nature of climate change impacts, improving resilience² and flexibility of a system will lead to effective adaptation rather than sustaining the status quo (Nelson et al. 2007). Somehow climate change adaptation aims to improve resilience so that a society can react to the unexpected risks posed by climate change or variability. As a way to generate more resilient adaptations, multilevel actors from variety of sectors should participate in the decision-making about adaptation actions (Nelson 2011). When a society is vulnerable, even small disturbances may cause critical changes in the system. By contrast, in a resilient social-ecological system, disturbance has the potential to create opportunities for innovation and for development (Folke 2006).

In spite of our efforts to reduce emissions, the trend of climate change will continue. Without timely adaptation, human societies will face the risks posed by climate impact (Parry et al. 2008; Adger et al. 2009a; Parry et al. 2009; Smit et al. 2008; Ford and Berrang-Ford 2011). Climate change adaptation is inevitable, both in developing and developed countries, for human wellbeing and security. Climate change, including extreme weather events will be more apparent in terms of intensity and frequency than at the present. As a way to make timely climate change adaptation, this research focuses on the importance of planned adaptation through establishing strategies or making policies. For example, a governance-based approach that ensures the participation of multilevel actors may be an effective method of adaptation.

I have discussed the background of this research by outlining the features of climate impacts in the world and in South Korea and explored the essence of taking adaptation measures to cope with the impacts and create successful adaptations by reviewing academic research and reports published by international organizations. The next section of this chapter will explore the rationale for this research, within the context of the broader literatures on climate adaptation and policy making.

²In this research resilience refers to the capacity of a system to absorb disturbances while retaining the essential functions, structure, identity and feedbacks within the system for recombining and evolving or transforming by using the impacts as opportunities (Folke 2006).

1.2. The Knowledge Gap

Research on adaptation to climate change has been undertaken in different ways in accordance with the interests and the methodologies of researchers (van der Sluijs and Dessai 2007). A governance approach to decision-making processes is generally recognized as a democratic process of policy making. Hence there is some literature published about climate governance, but very few studies have been carried out regarding the process of creating climate change adaptation policies from the perspective of political culture, and none have been done in South Korea. There are some studies regarding culture or values which influence the decision making about climate change adaptation, but little attention has been paid to political culture and how it has influenced the decision-making about climate change adaptation policies. However, political culture in the process of decision making about climate change adaptation will influence the outcomes of adaptation in negative or positive ways. Political culture can hinder or encourage climate change adaptation as cultural values in society (Adger et al. 2009b, pp.1-24). Therefore it is necessary to investigate the opportunities and barriers for successful adaptation to climate change and variability by examining the relatively understudied relationship between political culture and features of climate change adaptation governance. To achieve this purpose, I use a case study of climate change adaptation measures at the national level in South Korea.

The South Korean study is a good empirical case study through which to examine the influence of political culture which hinders or encourages the effective governance of adaptation decision-making in the process of national climate change adaptation policies because of its distinctive political culture. An examination of governance applications to climate change adaptation in South Korea will show the characteristics of the decision-making about adaptation policies under this specific political culture.

This is case specific research but the findings may apply to other regions and offer some directions as they consider how political culture undermines

participation of multilevel actors in taking action towards climate change adaptation, and may hinder successful climate change adaptation.

1.3. Research aims and questions

In order to fill this knowledge gap, I will investigate how political culture is expressed in the processing of the climate change adaptation policies of South Korea in the context of participatory governance. The aspects of political culture, attitudes or structures that are hindering or helping the governance of adaptation will be examined using primary data (that is, interviewing members of the Advisory Board) and secondary data (documents and literature). These data will help to answer the questions about whether the key challenges in a governance approach to climate change adaptation are external factors (for example, climate factors) or internal factors (for example, political cultures). The details of the methods to be used in this research will be discussed in Chapter 4.

My research aims to investigate and identify how South Korea responds to climate change adaptation. This aim will be achieved by addressing the following objectives:

- (1) To describe and interpret the key components of the adaptation policies in terms of climate change;
- (2) To identify the influences shaping adaptation policies using a series of interviews with key stakeholders;
- (3) To explore the ways in which adaptation governance for climate change is framed;
- (4) To identify what aspects of political culture are involved in the process of making climate change adaptation policies; and
- (5) To identify how political culture influences the governance of climate change adaptation.

Table 3 describes the research questions and the methodologies which were used in order to elicit answers to the above research questions. The details of the research methodologies will be discussed in Chapter 4 of this thesis.

Table 3: Research Questions and Methods (Source: Compiled by the author of this thesis)

Research Question	Methods
What are the key components of the adaptation policies, in terms of climate change, of South Korea?	Analyse documentary sources: laws and rules relevant to climate change policies established by the South Korean government; policy documents and reports published by governmental institutions; academic publications; news articles; and formal speeches, and interview data
What influences the shape of adaptation policies in the context of climate change?	Semi-structured qualitative interviews : face to face interview and supplementary telephone interviews Telephone interviews
How is adaptation governance for climate change framed?	Analyse documentary sources and interviews
What barriers and challenges to successful climate change adaptation are identified by the interviewees who are members in the Advisory Board?	Semi-structured and qualitative interviews

1.4. Thesis Chapter Plan

This thesis falls into three distinct groups. In the first group, the introduction, the theoretical background and methodological framework: Chapters 1 to 4, give the background of this research, the theoretical background and methodology are described. The first four chapters of this thesis provide the overall introduction and formulate the basic conceptual and methodological frameworks for the research. The second of group, from Chapter 5 to Chapter 7 presents the findings from the results of the analyses of policy documents, relevant literature and interview data; it discusses the results of this analyses in accordance with the theoretical frameworks introduced in the earlier parts of the thesis. Lastly, Chapter 8 is the final and concluding chapter of this thesis. This chapter summarises the findings of the research, demonstrating contributions to knowledge about climate change adaptation, and ends with concluding remarks and suggestions for further research.

Chapter 1 introduces the background, the objectives and research questions of the research. Also, this chapter rationalises the need for this research by demonstrating the background of the research: identifying the gaps in theoretical knowledge, and problems related to the delivery of climate change

adaptation. This chapter summarises the research questions and how the whole chapters of the thesis fit into the whole.

Chapter 2 and 3 set out the theoretical background of the whole research package. In these chapters, key concepts of the thesis are presented and critiqued: the advantages and disadvantages of governance, type of political culture; and the characteristics of the South Korean political culture by reviewing relevant literature.

Chapter 4 explains the framework of the methodology used for this research and briefly describes the socio-cultural background and topographic features of the case study area. This chapter also describes the process of selecting interviewees; the ethics adhered to with respect to the interviews, positionality of me as an interviewer, the details of practice of interviews, and the methods employed in the analysis of the documents. This chapter provides the general methodological structures used to answer the research questions and to achieve the research aims.

Chapter 5 critiques the climate policies and the governance structure in South Korea from the perspective of the governance concepts and political culture outlined in Chapters 2 and 3. This chapter presents findings about the expression of political culture in the process of policy making by analysing government documents and relevant literature published by government institutions or the government of South Korea. In addition, this chapter identifies governing instruments currently used for climate change policies in South Korea. Chapter 5 provides the basis for the guidelines provided to the interviewees' to direct their responses and the backgrounds of those who responded.

The result of the interview analysis is divided into two chapters based on the attitudes of those who took part in the interviews regarding climate change adaptation of South Korea. Chapter 6 discusses the complacency of many interviewees regarding the progress of climate change policies; and Chapter 7 the concerns expressed in some of the responses. As the first chapter analysing the responses of interviews, Chapter 6 explores the reasons given by interviewees for what they considered to be the successful delivery of

adaptation policies and interprets the reasons for their complacency. An analysis of the interviews addresses the question of the policy cultures and political culture expressed in the policy decision-making about the National Climate Change Adaptation Measures.

Chapter 7 is the second part of the analysis of the findings produced by the interview data. In contrast to Chapter 6, the focus of this chapter is on those who showed by their responses that they were dissatisfied with adaptation policies and governance systems in South Korea. Also, barriers to, and challenges facing climate adaptation governance are investigated.

Chapter 8 is the overall conclusion to this research. This chapter summarises the findings of the research and discusses it in within the context of the conceptual framework and research questions. Based on the findings of this research recommendations will be made for policy makers to consider when making climate change adaptation policies at national or local levels. In addition, this chapter will demonstrate how my research makes a contribution to knowledge advance and in the end addresses the limitations of the research. The chapter will close with suggestions for further research and policy implementation.

Chapter 2. Critically assessing the governance of climate change adaptation: The lesser of two evils?

“Governance is...constantly evolving and responding to changing circumstances (Walters 2004, p.29)”.

2.1. Introduction

There is general agreement that for our own safety, it is of paramount importance that we respond to climate change adaptation. Among the various possible responses to climate change precautionary and planned adaptations have been described as being more effective than spontaneous and reactive adaptation (IPCC 2007a; Grothmann and Reusswig 2006; Fankhauser et al. 1999; Paavola 2008). However, in reality, it is difficult to take precautionary adaptive actions and make policies before there is a felt need for them (Wolf 2011). Another issue is that it is usual for the state to play the core role in adaptation by adopting a top-down approach. However, it is argued that such a traditional approach may be inadequate to respond to the complex impacts of climate change and variability. Accordingly, many scholars argue that the success or failure of climate change adaptation depends on the effectiveness of governance and so undertake research on the linkages between governance and adaptation (Adger et al. 2011; Adger et al. 2009b, Chapter 25).

Then what is governance? Are there any disadvantages associated with it? Governance is an approach that does not see the exercise of power as being limited to the actions of government or the state, but includes all forms of activities taken by multilevel actors (Kooiman 1993; Chhotray and Stoker 2009a; Richards and Smith 2002). In particular, the governance approach highlights public participation in decision making (Rhodes 2007; Rhodes 1997). Governance also has some limitations even though it is recommended by many scholars as a more appropriate approach to climate change adaptation than a top-down direction from central government. One of the key issues for governance is how to manage the relationships between diverse actors and

ensure that they share collective goals (Chhotray and Stoker 2009b), while improving the effectiveness of policy delivery. Another constraint is the ambiguity of accountability. As more actors participate in the process of making policies and sharing rights, accountability for these decisions becomes more ambiguous (Kjaer 2004). There are some sceptical views of the governance approach because of its disadvantages, which will be discussed later in this chapter. Notwithstanding the disadvantages, it is argued why the governance approach can provide the lesser of two-evils: that is, it can provide effective methods for adaptation to climate change. The following section will explore the disadvantages and advantages of adopting the governance approach in the context of climate change adaptation before I present the reason for supporting governance approach to climate change adaptation.

2.2. Limitations of a governance approach

Bob Jessop argues that just as the market and the state may fail, so may governance (Jessop 1998). He lists several limitations that may lead to a failure of governance: these include oversimplification of conflicts occurring among actors; the ambiguity of accountability; weak steering and mediating mechanisms and lack of legitimacy related to the non-elected participants. If there are some limitations to governance, it is reasonable to discuss how they will constrain a governance-based approach to climate change adaptation.

The potential disadvantages of governance will be discussed by classifying the types of governance according to whose role is emphasized in the structures (Kim 2002a) ; the state-centred governance where the state retains the central role in decision making; civil society-centred governance where democratic development is a main concern; market-oriented governance in which competitive corporatism is the key doctrine; and multilevel governance; as exemplified by the European Union governance.

2.2.1. State-centred governance

This form of governance includes New Public Management (NPM), Good Governance of the World Bank (WB 1994), and Corporative Governance (Osborne and Gaebler 1993). This approach involves governmental and administrative management becoming more entrepreneurial and seeking to transfer public service functions to civil society organisations (Kim 2002a; Pierre and Peters 2005), but the state retains the central role in decision making. The state generally focuses on the outcome of policy delivered rather than on the relationships among actors. The success of this type of governance depends on how well it retains the balance between political bureaucracy and collectivism, and manages conflicts and tensions between the varied actors involved (Kim 2002a; Rhodes 1996). When conflicts and tensions between participants are too serious for the state to manage, the equity and democracy of the social system will be called into question so that there will be little prospect of achieving policy goals.

By adopting some of the desirable features of private sectors, NPM seeks to increase the efficiency and effectiveness with which public services are delivered while rejecting the bureaucratic culture (Rhodes 1996; Pierre and Peters 2005). Although NPM is supposed to deliver better outcomes, its critics stress that it has weaknesses: these are listed by Rhodes (1996) as focusing on intra-organisational matters; concentrating on objectives; being result-focused; and suffering from the contradiction between competition and steering (Rhodes 1996).

Osborne and Gaebler (1993) argue that the government should be catalytic (through steering), competitive, mission-driven, result-oriented and anticipatory in order to be efficient and effective in providing best services to its customers. They suggest that if government discharges its administrative duties in a more entrepreneurial way while abandoning traditional bureaucratic culture, it will become more innovative, more flexible and have higher morale. They argue that entrepreneurial governments are inventive in choosing outcomes to pursue so that public entrepreneurs make heroic efforts to give good performance. However, if market competition is not carefully structured or managed, the policies cannot be equitably or efficiently delivered (p.104). In addition, there are some sectors where it is difficult to introduce competition into the public service.

The system for rewarding such public entrepreneurs may raise ethical issues and may not work in some institutional contexts.

The World Bank's 'Good Governance' approach allows the states in the third world to manage limited resources and public goods with transparency, accountability and fairness (WB 1994). It is argued that the 'Good Governance' is accomplished by changing power-distributions, developing the democratic political structure and creating an open administrative system, for example independent public auditor (Rhodes 1996). The 'Good Governance' approach of the World Bank suggests privatisation for solving complex societal problem in developing countries; however in reality privatisation is very political and it is not neutral or a natural response (Walters 2004). In addition, it is not a simple task for the states in developing countries to reform the decision making process (Chhotray and Stoker 2009b).

The key feature of the state-centred governance is that the state remains as a central actor, the central decision maker with the power to share with other actors (Pierre and Peters 2005). This type of governance can be applied to the society where democracy in its political structure or participatory culture is less developed, so the state gets involved in determining who will participate in policy making and decides what policy will be prioritised with the help of institutionalized systems (Pierre and Peters 2005).

2.2.2. Civil society-centred governance

The second type of governance sees civil society organisations as key players. The civil society-centred governance model is operated on the basic theories of participation and collectivism by plural actors (Kim 2002a; Kjaer 2004). Governance without government is categorised in this type of governance, and this type of governance does not take the role of government seriously (Kjaer 2004). Non-governmental organizations or civil society organisations play a key role if this type of governance is to be effective by establishing well-ordered networks and efficient partnerships (Kim 2002a). As the key actors of this governance are plural civil society organisations, they are supposed to have the

capacity to represent and address the collective interests of citizens. Therefore, the participants usually are non-elected actors in contrast to government elected officials and their legitimacy and capacity is often doubted (Pierre and Peters 2005).

It is claimed that this governance type is appropriate for societies where citizens have high levels of self-autonomy and ethical values (Kjaer 2004). Rhodes' social-cybernetics, self-autonomous networks and corporative governance, and Peters' participatory governance are examples of this type of governance (Rhodes 1996; Pierre and Peters 2000; Kim 2002a). It did not seem problematic for social-democratic Western European countries to adopt this type of governance in order to govern social welfare, because there civil society organizations have the capacity to participate in political activities (Kim 2002b). However, this type of governance may not be appropriate if there is a low level of public capacity in participating with political decision making or information systems are rarely open to private sector.

This type of governance can be ineffective for a society where citizens do not actively participate in political activities or are indifferent to political objectives and there is less opportunity for information sharing with government. Moreover where social inequity exists in power sharing among social members, the inequity may be exacerbated by adopting this type of governance. If strong CSOs support for this system for their own benefits without representing the collective goals of their society or considering socially vulnerable and marginalised groups, public service is not delivered equally to all members (Pierre and Peters 2005; Chhotray and Stoker 2009b).

2.2.3. Market-oriented governance

Those advocating this governance type believe that public service can be distributed more efficiently by market competition rather than by the command and control of government (Kim 2002a). Governmental officers are motivated by incentives and rewarded differently depending on their duties and their achievements in delivering policies. However, it is argued that there is a

problem for managing public services by the rule of the market, as the management of public services is fundamentally different from that of the commercial market (Kim 2002a). With regard to this, Jessop argues that the failure of the state's intervention for solving the inefficiencies through privatisation and deregulation can lead to deficiency of democracy and degraded social governance (Jessop 1998).

When this argument is applied to the climate change discourse, global market based governance to mitigate climate change must be added to the equation. Discourse of on global governance in climate change began with international negotiations regarding the allocation of responsibility for climate change and the extent of burden-sharing among countries (Dicken 2010, p.2). However, for the past decades, the cooperative efforts to cope with climate change have revealed limitation in effectiveness (Jagers and Stripple 2003; Bulkeley 2010b). In addition to the limitation of governance itself, spatial and temporal uncertainty and the different scales in of impacts related to climate change, make international cooperation challenging (Meadowcroft 2009). If we talk about governing climate change, we need to take account of the characteristics of climate change which are complex and dynamic (Adger et al. 2005b). Members of the global community take advantage of this making it an excuse for delays in taking action. Climate governance tilted towards market solutions and depending on good-wills does not seem to reduce the risks posed by climate change (Rothe 2011).

Such market-based governance for mitigating climate change is not working successfully. The world's biggest greenhouse gas emitters which have the greatest power in global community do not take responsibility for climate change or take undertake obligatory reductions of greenhouse gas emission (Keohane and Victor 2011; Kern and Bulkeley 2009). As global financial and economic governance manifested inequity of power sharing between developed and developing countries, a similar situation is observed in international negotiations on climate change (Shirlow 2009, p.42). Powerful developed countries are reluctant to taking historic responsibility for climate change, while developing countries, which usually are more vulnerable to climate change than developed countries, are blaming the presently posed risks on the industrialised

countries (Dicken 2010). For example, the Kyoto Protocol was introduced in order to make provision for the initiation of substantial action against climate change (Dicken 2010; Haug et al. 2010). The same protocol set the numerical target of reducing emissions within a limited timeframe using three mechanisms (UNFCCC 1998). Therefore it was difficult to make an agreement following on from the Kyoto Protocol which had run its course in December 2012, although global communities did achieve a collective goal of reducing emissions of greenhouse gas (Dicken 2010, pp. 537-550).

2.2.4. European governance: Multilevel governance

The term 'multilevel governance' was first used in 1992 and developed to explain the structure of the European Union's decision making (Bache and Flinders 2005, p.2). It refers to a system of continuous negotiation among interdependent actors at several territorial levels and the distribution of decision making across multiple territorial levels while states share power with diverse actors (Bache and Flinders 2005, p.95). As such, multilevel governance is defined as the interlinked governance between international (or sometimes supranational), national and subnational governments with diverse actors from non-public and public (Pierre and Peters 2000, p.72; Hooghe and Marks 2003). Decision making processes in the European Union (EU) do not reside solely in member countries but also on the negotiations between subnational, national, and supranational actors (Pierre and Peters 2000). Literally, multilevel governance refers to a multilevel decision-making process that is steered by plural actors across multiple locations and sectors (Keskitalo 2010).

Multilevel governance is considered to be more efficient in making policies than a monopoly of central states for the reason that governance at multiple levels can more readily capture various policy externalities, and solve the problems (Marks and Hooghe 2005). As climate change generates complex, diverse and dynamic impacts in societies, any single actor alone does not have sufficient capacity to solve the problems (Jordan et al. 2003). Therefore responding to climate change, the multilevel governance approach in the EU can achieve successful goals. In a case study of the Norwegian municipalities' role in

governing climate change, Amundsen et al. (2010) demonstrate that a multilevel governance framework is preferable to making proactive adaptation policies by removing the barriers occurring between national and subnational governments (Amundsen et al. 2010). The subnational level governments are likely to find their interests less well represented when determining goals (Pierre and Peters 2005).

However, multilevel governance has its weaknesses. The autonomy of subnational actors is overstated while the importance of the state's role as the important decision maker is underestimated. When there are conflicts between these actors, there are few means of resolving those conflicts among the participants (Pierre and Peters 2005). When the role, power and responsibility are not explicitly distributed among the actors, collective decision making in this governance is in fact dictated by the stronger players, which is a more serious problem associated with multilevel governance (Biesbroek et al. 2010; Pierre and Peters 2005; Kjaer 2004). Moreover, the capacity of subnational actors is not developed and weak capacity may result from taking actions by themselves, thus this governance type is likely to fail. Lack of motives or incentives to attract subnational actors to the process of decision-making tends to make people apathetic to the policies made in the multilevel governance system.

In multilevel governance, decision about policies is largely made by negotiation between participants rather than by formal rules and constitutions (Pierre and Peters 2005). Peter and Pierre (2005) argue that such informal and multilevel negotiations can result in *the darker consequence* (p.83). In the process of policy making, the powerful countries take control over the weaker in setting the policy agenda, determining goals of policies and the measures to achieve the goals. Walters (2004) expresses a sceptical view of the large scale of EU governance and of such power relations shaped in the multilevel governance. Besides, there are no proper systems to solve conflicts which occur between the varieties of participants. Therefore the conflicts tend to be solved at other locations or not solved at all (Walters 2004). It is argued that a regulatory framework should be defined in order to make multiple-level governance work effectively.

Well-coordinated networks across multiple tiers of governance and well-organised interrelationships between formal and informal institutes are required for multilevel governance to work successfully (Juhola and Westerhoff 2011). As another pitfall of multilevel governance, it is remarked that it generally focuses on subnational authorities rather than subnational private actors. By arguing that multilevel governance might overlook the role of local level governance, instead of vertical multilevel governance, Bulkeley suggests that transnational networks for solving global climate change are working better than horizontal governance, because transnational network governance has fewer vertical relationships among members (Bulkeley 2005). State and non-state actors build horizontal cooperation in achieving the negotiated goals (Betsill and Bulkeley 2004). This horizontal collaborative governance among states has limitations, as the willingness of the members and leadership of the states decides the effectiveness of the governance. The negotiations and policies achieved by transnational networks may not be accepted by state governments and some states do not have the resources to participate in international networks and express their rights as members of the governance structure (Kern and Bulkeley 2009). If this is the case, the policy will be decided by strong and powerful members.

As a response to the failure of state intervention and alleged inefficiency in delivering public services, the governance approach using the market, building networks or establishing partnership with non-governmental sectors are introduced (Jessop 1998; Kjaer 2004; Chhotray and Stoker 2009b), but governance also reveals some limitations and faces a problem of unclear accountability arising from various and multiple participation. Although these disadvantages exist, governance can increase the flexibility with which the system can adapt to changes, and respond to public needs more effectively (Kjaer 2004). Accordingly, in order for governance to work effectively, there is a need to address these issues by a greater clarification of roles and responsibilities and by developing new mechanisms that stress power-sharing and joint learning. Besides, governance provides more opportunities for various actors to generate more policy options (Chhotray and Stoker 2009b; Richards and Smith 2002).

As discussed in this section, governance has limitations and, in practice, has definite disadvantages. Nonetheless, scholars argue that governance be considered as a positive determinant in building adaptive capacity. Governance approaches have weaknesses and may not be the perfect method to approach climate change adaptation, but it can be the lesser of two evils. I suggest that governance is better than bureaucratic and authoritative governing by fiat.

2.3. Advantages provided by a governance approach

The previous section examined the disadvantages of a governance approach. Although there are some constraints, I suggest that the governance approach be accepted as a pragmatic approach for adapting to climate change. Accordingly, this section identifies the reasons for my support for the governance approach by exploring its advantages. I begin with adverse effects posed by a top-down approach which is assumed to be the opposite approach to governance; as an example the governance approach to environmental disputes in South Korea is given; and current research on global climate change governance is examined.

2.3.1. Comparisons with the top-down approach

The term 'top-down' approach is used to describe the structure of a policy process which involves strong governmental command in the management of public policies (Hare et al. 2010). It is also defined as the process of decisions making made by government officials and implemented and evaluated mainly by governmental command and control (Sabatier 1986).

Many states adopt a top-down approach in climate policies, for example the UK and the Netherlands have, for the most part, adopted a top-down approach to governing climate change through governmental institutions (Keskitalo et al. 2012; Urwin and Jordan 2008; Meadowcroft 2009; Hoppner 2010; Brooks et al. 2005). It is argued that a top-down approach is more effective in obtaining global coordination for achieving the global goals of reducing emissions and can

provide the transparent and accountable process of monitoring and evaluating emission reductions (Wheeler 2008; Hare et al. 2010).

However, talking about adaptation to climate change is different from the discourse of mitigation. There are many who worry that by addressing issues using the top-down local approach has often been undermined hindering the development of more robust and locally attuned adaptive responses (Urwin and Jordan 2008). Many scholars argue that climate change adaptation requires multiple actors from diverse areas at different scales to achieve effective implementation. A top-down approach may solve problems fast in terms of speed, but it reduces the opportunities to interact with diverse actors and to learn from their response to changing circumstances, problem solving and conflict resolution (Fazey et al. 2011).

Challenges imposed by a top-down approach to policies are more serious than achieving policy goals (Sabatier 1986). Firstly, in the case of complicated and unexpected situations which occur and hinder effective policy implementation, state cannot manage all the current complex issues by itself. Secondly, the social equity issues must be taken into account. A top-down approach excluding diverse actors is likely to pay less attention to the needs of vulnerable groups (Adger et al. 2009a). And the third factor is related to the issue of underestimating the roles of stakeholders who can provide local knowledge and information which may be helpful for making more effective policy options (Sabatier 1986). When the focus is directed to local level policies, it is evident that by excluding local actors or by ignoring particular local situations, the efforts of policy makers often result in poor cooperation from local communities at the implementation stage (Hess 1998). Central government is not in a position to know everything in all regional conditions or the strength of local interests (Brondizio et al. 2009). In addition, the implementation of adaptation strategies should be a two-way information exchange between policy makers and target groups (Corfee-Morlot et al. 2011). Without active involvement of local actors or by ignoring the particularities of local situations, the efforts of policy makers adopting a top-down perspective, often results in the temporary upsetting of local players (Hess 1998).

Some policy makers support a top-down approach by levelling the criticism that a bottom-up approach to climate change adaptation is likely to result in ad hoc reactions prevailing which may reduce resilience to future change (Gagnon-Lebrun and Agrawala 2007; EC 2009). Or, that in the cases of local communities, they have weak capacity; consequently policies made by a top-down approach and government support in the form of technical support, are recommended (Bele et al. 2011). However, a top-down approach may solve problems rapidly in the short-term, but it will reduce the opportunities to interact with stakeholders or local actors. Shared learning, problem solving and conflict resolution are considered necessary to deliver effective adaptation policies (Fazey et al. 2011). This goal can be achieved through the governance approach rather than a top-down approach. Due to the restrictions imposed by short-term central budgetary cycles or other factors, a top-down approach is preferred by some states (Carter 2011). However, for long-term and resilient coping with climate change, a top-down approach is not the appropriate strategy.

2.3.2. Governance in South Korea

As discussed in the previous section, when compared to problems arising from a top-down approach to climate policies, the weakness of a governance approach are not as serious and can be mitigated by providing some supplementing mechanisms. It was in the 1990s that South Korea introduced governance as a new administrative mechanism. Since the 1960s, South Korea has focused on economic development without paying attention on environmental damages. As it achieved social and economic development at some level and the level of participatory culture of people increased, they pay more attention to the importance of environment rather than focusing on economic development. Whenever the government plans to implement a large-scale development project which may result in detrimental impacts on environment, stakeholders want to express their opinions or objections to the projects. Reflecting on such social and cultural condition, the government has adopted collaborative governance approach in effective delivery of such public projects as large-scale construction (Kim 2010).

As governance paradigms were derived from the Western experience, there are those who are sceptical regarding their application to the South Korean governance policy culture (Kim 2002a). Some scholars are not convinced of the capacity of private sectors and argue that therefore the central government should stand at the centre of decision-making even for governance to work properly (Kim 2002a, p.48). And a lack of the knowledge of the process of making policies resulting from the short history of private participation, and CSOs' depending on government for their financial supports may limit their role as independent political actors (Ra 2006). This is not simply a rejection of political culture of South Korea; central government stands in the centre as the most important decision maker and commander. The underlying idea of a traditional, vertical, top-down and hierarchical policy structure has been recognised as a cost-effective and quick way to achieve policy goals (Eun and Oh 2009).

Sharing power with private actors by inviting them to engage in the process of policy delivery is not usual way to solve social conflicts in South Korea. Governance theories which originated in the West should be adjusted in accordance with Korean culture and political structures goals (Eun and Oh 2009). When governance is applied to climate change adaptation in South Korea, it is expected to take account of non-climatic factors as well as climatic factors. The details of the political culture of South Korea will be discussed in Chapter 3 in this thesis dealing with its political culture.

I have discussed how governance is adopted in South Korea. Although the role of the state is still located at the centre, there is some progress in terms of governance development through allowing private actors to participate in the decision making process in South Korea.

2.3.3. Governance approach to climate change adaptation

I have explored the negative effects of a top-down approach to climate change adaptation and the attempts of South Korea to using a collaborative approach to

take account collective public opinions. This section explores how governance operates in its responses to climate change and adapting to it.

It is generally argued that climate change generates complex, diverse and dynamic impacts in societies so that the state alone does not have sufficient capacity to solve the problems (Jordan et al. 2003). Undoubtedly the effective way to govern climate change should be flexible, accountable and practicable. Therefore, well-coordinated networks across multiple tiers of governance and well-organised interrelationships between formal and informal institutes are required in a multilevel governance framework for effective climate change adaptation (Juhola and Westerhoff 2011). In other words, climate change adaptation needs multiple actors from multifaceted sectors, multiple levels of government, and diverse institutions, in order to achieve effective outcomes (Keskitalo 2010; Hooghe and Marks 2003; Pahl-Wostl 2009).

Owing to a lack of legitimacy of the participants, and a distrust of the capacity of civil society organisations, and the strong bureaucratic attitudes of some states, some of limitations of the governance approach to overseeing climate change adaptation must be acknowledged. However, these challenges can be overcome by adopting appropriate governance arrangements (Pierre and Peters 2005; Jessop 1998). The Climate Change Act in the UK is seen as a good example of a multi-level framework used for governing climate change adaptation. The multilevel organisations of adaptation in the UK include both horizontal partnerships and vertical partnerships (LRLP). It is argued that the reason of such multilevel approach to climate change adaptation is the express of NPM characteristics of the UK system, in which the UK government takes a state-led approach to climate change adaptation (Keskitalo 2010). The example of the UK shows disadvantages or constraints in the governance approach to the delivery public service related to climate change adaptation. But there are ways to overcome the limitations.

As a way of overcoming the challenges posed by governance and taking into account of the political structures (Pierre and Peters 2005; Jessop 1998), I attempt three types of governance arrangements which are fabricated from the existing governance types formulated by other scholars and these are also

(Refer to Table 4). These can be applied to governing climate change adaptation depending on social capacity.

Table 4: Suggestion of governance arrangement

Governance arrangement	Description
State-led	<p>The state has is in the centre of decisions regarding adaptation policies, because civil society organisations or subnational actors have weak capacity.</p> <p>Unlike command and control by the state, this type of governance arrangement gives opportunities to the private sector to improve its ability by opening up information and the decision-making process.</p>
State-tiered	<p>The state reduces its bureaucratic steering and entices the stakeholders into the system of governance. The state should collaborate with the private sector and civil organisations.</p> <p>The state shares power with a variety of actors in making decisions.</p>
State-facilitated	<p>The state facilitates governance by providing technical support and resources.</p> <p>Civil society organisations, private actors and local level actors should have the capacity to evaluate and participate in decision making. The state also acts as one of the decision makers by sharing power and information with private and local level actors.</p> <p>The private sector has greater power than in the two other types of governance and the state facilitates the governance mechanism.</p>

(Note: Terminologies in the table are made by the author, but the contents are a reflection of the existing governance theories)

All the types of governance admit the state as one of important actors in governing climate change adaptation. The first type of arrangement is called state-led governance. In this governance arrangement, the state has a steering role and coordinates the process of policy making with the help of political and technical experts groups: this reflects the capacities of civil organisations which are very limited and weak or even which are not really interested in political activities. Until civil organisations are able to participate actively, the state plays the major role in the procedures of decision making. The second type of arrangement is called as state-tiered governance. In this type of governance, power sharing is the order of the day and the role of the state is reduced. The state collaborates with private actors and civil organisations from the stage of setting a goal of climate change adaptation through to the stage of monitoring

and evaluating the adaptation measures. People are more interested in political objects than is the case in the first type of governance arrangement. And lastly, the third type of governance arrangement is called state-supported governance. In this type the state remains the role of steering but its key role is that of the provider of data and resources. In cases of conflict or the unequal distribution of power or resources, the state will monitor the exercise of governance properly by establishing independent institutions. For this type of governance to work effectively, private actors and local governments should be willing to participate in political activities and be interested in the political objects.

2.4. Summary

In this chapter I have argued that the governance approach can provide the most effective coping strategy for adapting to climate change in spite of some constraints: I have done this by comparing the disadvantages and advantages posed by a governance approach. I don't support governance because it is a perfect method to cope with social and environmental change but because it is a lesser evil than an authoritarian approach to decision making. In order to support the argument, I have compared the disadvantages of a top-down approach which has been the traditional and general decision-making process in South Korea to the governance approach. I have expressed my support for the governance approach to climate change adaptation in that it will provide more diverse and substantial policy options which can promote the building of adaptive capacity and prove s society to become more resilient to uncertain changes in the future.

Governance is adopted as the process of decision-making, planning and implementing various public policies in order to improve the effectiveness of policy delivery. The methods could include building inter-organizational networks, adopting market mechanisms or establishing partnerships. A governance approach has some limitations, but it should reflect interactions between actors, and the political and social cultures of the society (Doherty and Schroeder 2011). For the purpose of achieving collective goals regarding climate change adaptation, actors at different levels should share responsibility

(Schreurs 2010). However, it is not a simple matter of deciding who has how much accountability (Betsill and Bulkeley 2006; Lebel et al. 2006; Eakin and Patt 2011). Besides, there is temporal and spatial discrepancy between the cause and effect of climate change. Issues related to climate change are experienced on a multitude of scales, so it should be solved at these scales (Buizer et al. 2011). Therefore it is necessary to establish some type of platforms of for including as many multiple and multilevel actors as possible (EC 2007; Bulkeley 2010a).

Sometimes there exists a big gap exists between government policy for climate change adaptation and the views of community-level stakeholders in local communities; this hinders the implementation of the adaptation policies (Lata and Nunn 2012; Raaijmakers et al. 2008). Well operated collaboration and coordination from each level of governance based on joint partnerships can facilitate adaptation to climate change and make societies more resilient to the uncertainty of impacts posed by climate change stakeholders (Loring et al. 2011; Paavola and Adger 2006). Governance types can become diverse in terms of scales and the techniques used to incorporate actors at each level. Such a variety of governance might be differently arranged depending on cultural and political structures and differences. For example governance arrangements between in Northeast Brazil for governing prolonged drought (Nelson and Finan 2009; Toni and Holanda Jr 2008) and in the UK for governing flood management of the Thames, are different. Governance approaches to the South Korean policy environment is modified according to the South Korean political culture (Kim 2002a, p.48; Kim and Kang 2004).

Then in order to understand how South Korea responds to climate change adaptation using the governance approach, it is necessary to explore the main characteristics of the political culture and how it influences political activities. To address this question, the next chapter will discuss the political culture of South Korea along with the background theories of the political cultures.

Chapter 3. Political culture in governing climate change adaptation

“Political culture is defined as the set of attitudes, belief, and feelings about a political system and a set of orientations toward a special set of social objects and processes in a nation at a given time” (Almond and Verba 1963, p.25).

3.1. Introduction

This study focuses on how political culture influences decision-making with respect to climate change adaptation policies. This is done by interviewing a group of experts in South Korea and by an analytical review of documents related to the process of developing the national climate change adaptation policy of South Korea. To investigate the procedural characteristics of decision-making about climate change policies, this research will be carried out in the context of the political culture in order to examine how the policy culture has influenced climate change adaptation in South Korea. Therefore, in this research I will concentrate on political culture as a factor that has exerted a significant influence over this decision making.

As stated, the intention is that this chapter will explore a process policy decision making regarding the climate change adaptation policies of South Korea. In order to understand the way such political cultures are expressed in the process of making the NCCAM, it is necessary to address the characteristics of the political cultures and political structures. The chapter will begin by exploring background theories related to political culture and examine political cultures and how these have influenced the governance approach to climate change adaptation in South Korea. Firstly, I will explore briefly the theories which relate to relevant political cultures and to the characteristics of the political cultures of South Korea. Later before closing this chapter, I will discuss possible governance arrangements which can be incorporated into the types of political cultures.

3.2. Understanding political culture

Culture in a society is described as the collection of values, beliefs, and thoughts, which influence the process of decision-making and behaviours in the society. People are influenced by their cultures when they live lives, think and behave. The culture expressed in the daily civic life in the forms of their feelings, thoughts and behaviours is called their political culture (Rosenbaum 1975, pp.4-7). Political culture, which is also called political orientations, appears in the values or the beliefs people hold regarding political systems, and the roles of political participants and the foundation for judging their decisions about political actions (Almond and Verba 1963). People evaluate and respond differently to governmental institutions and public policies made by governments based on their political orientation to political systems (ibid). Political cultures of people influence their attitudes when they make decisions towards political objects and express opposition to other people's decisions (Kavanagh 1972, p.10; Eatwell 1997).

This study aims at identifying what challenges are faced by using the governance approach to climate change adaptation when impinged by political culture. This is done by interviewing members of the Policy Advisory Board which is composed of political elites and climate experts in South Korea. Their political attitudes and orientations, in other words their political culture, may directly or indirectly influence their decision-making regarding national climate change adaptation policies. Therefore, it is necessary to explore the concepts and characteristics of general political cultures in South Korea in order to understand the background of decision-making, and its procedural characteristics with regard to the governance of climate change adaptation. The importance of political cultures in this study of a governance approach is not in question (Almond and Verba 1963; Kavanagh 1972). Therefore, it is desirable to take into account the theories of political culture in any discussion, of a governance approach to climate change adaptation policies and in an analysis of the opinions of policy advisors.

3.2.1. Conceptualising political culture for the purpose of this research

Political cultures are conceptualised by scholars using different typologies; for example, Almond and Verba classify political cultures based on one's political attitudes and orientations towards the political process (Almond and Verba 1963), and Rosenbaum uses more integrated and fragmented political cultures depending on the degree of political stability of a nation than those of Almond and Verba (Rosenbaum 1975). There is a slightly different approach to the analysis of political behaviours of people. Lowi and Richardson focus on policy and highlight the importance of policy style in decision-making processes rather than political culture (Lowi 1964; Richardson 1982). Some scholars argue that policy style changes the process of policy making; however, there are other argument saying that policy styles are not easily generalised in different political systems or different types of policies. For example, the criteria suggested by Lowi for classifying policy styles are ambiguous and not exclusive of each other. Therefore, scholars redefine or modify Lowi's approach depending on their research aims when they adopt the approach (Richardson 1982; Cook 2010). As this research is studying a single type of policies regarding climate change adaptation in South Korea, it does not intend to compare different policies or generalise policy style in South Korea. Rather, the study is investigating the political orientations of political actors in the processes of policy decisions, which is similar to Almond and Verba's approach to political culture. Their approach puts weight on political culture as an essential factor for political structure or behaviours. In order words, they adopt political culture as a variable for political structure or behaviour. As argued by Almond, values, memories and cultural contexts are critical elements for explaining the political behaviours of people. Their argument is consistent with the questions I set out in Chapter 1 of this thesis. In addition, the concepts of political culture of Almond and Verba include traditional and modern culture. The political culture of South Korea is argued to have both traditional and modern characteristics. The details will be discussed later in this Chapter.

Political culture is defined as 'the set of attitudes, belief, and feelings about a political system and a set of orientations toward a special set of social objects

and processes in a nation at a given time' (Almond and Verba 1963, p.25). A typology for political cultures is conceptualised based on the dimensions of how much individuals are cognitive of political objects, how much affection they have for the objects, and how they evaluate the objects. These are identified as: a parochial political culture, subject political culture and participant political culture (Almond and Verba 1963). Political orientations in each political culture are affected by various factors, for instance, social, cultural, economic and political conditions. The political attitudes are expressed in allegiance, apathy, or alienation in different political structures (Almond and Verba 1963; Kavanagh 1972). It is argued that if the three political cultures perfectly match each political structure, all individuals in the political structures show allegiant political attitudes (See Table 5). Where a parochial culture is perfectly congruent with the diffuse structures of the tribal or rural community, people are aware of it, feel affected by it and evaluate political objects positively, that is, they are an allegiant parochial political culture. Where subject culture and participant culture are congruent respectively with centralised authoritarian political structures and a democratic political culture, people in the political culture have allegiant attitudes towards political objects (Almond and Verba 1963, p.21).

Table 5: Theoretical Political orientation when political culture is perfectly congruent with political structure

Political cultures congruent with political structures	Political Orientation Towards Political Objects		
	Cognitive	Affective	Evaluative
Parochial political culture congruent with the diffuse structures of the tribal or village community	+	+	+
Subject Political culture congruent with centralised authoritarian political structure	+	+	+
Participant Political culture congruent with democratic political culture	+	+	+

However, it is not possible to create a perfect congruence between political cultures and political orientations; instead there is always incongruence so that people feel apathetic or alienated towards political objects or public policies. As incongruence increases, the instability of the political system grows. People will become more apathetic and be alienated towards political objects. Table 6 explains the relationship between political culture and structure when congruent

conditions or incongruent ones apply. If the incongruence between political culture and structure increases, people’s attitudes shift from allegiant to alienated.

Table 6: Congruence and incongruence between political culture and structure (Source: Almond and Verba p.22)

	Allegiant	Apathetic	Alienated
Cognitive orientation	+	+	+
Affective orientation	+	0	-
Evaluative orientation	+	0	-

(Note: ‘+’ indicates positive orientation, ‘0’ indifference, and a ‘-’ a negative (or hostile) orientation)

As will be demonstrated the attitudes of advisors for the NCCAM are allegiant or apathetic towards the policies or political objects because they have been impacted by the general political cultures of South Korea.

I will now proceed to discuss each type of Almond and Verba’s political cultures in the context of climate change adaptation policies and the governance approach. Firstly, a parochial political culture is generally observed in traditional societies where no professional political activists exist or lay people seldom understand political actions or are not interested in political activities (Almond and Verba 1963). In this type of political culture, people generally take autonomous adaptation actions to climate change in local communities using historical and traditional knowledge. However, their autonomous actions are sometimes regarded with scepticism for the reason that they are sometimes considered to be maladaptations in that they may reduce adaptation options or undermine adaptive capacities to potential or unexpected future changes by narrowly focussing on particular impacts (EC 2007; Walker et al. 2006; Nelson et al. 2007). However, a parochial political culture can be used for make the society effectively adapting to climate change by transforming the process of decision-making. A case study of adapting to chronic drought in the north-eastern region of Brazil shows the possibility of transforming adaptation governance from traditional and a dominant parochial political culture to a more democratic and effective governance. More details of this case study will be discussed later in the section on theoretical integration.

In the second type, the subject political culture, people recognize governmental authority and usually show a passive relationship towards public authorities (Almond and Verba 1963). Individuals acknowledge their political systems and are mostly interested in political actions but do not make an effort to participate in political activities (Almond and Verba 1963; Kavanagh 1972). Such passive attitudes in subject cultures are sometimes claimed to create authoritarian political systems or even a totalitarian system (Almond and Verba 1963, p.26). The history of dictatorship in South Korea supports that argument. This history is imputed to a subject political culture combined with Confucianism which has a profound influence on cultures in South Korea (Ringen et al. 2011; Lee 2003). More detail of this history will be discussed in the section on the South Korean political culture.

The third type of political culture is a participant one. Typically with this cultural attitude, citizens show an interest in political systems and tend to get involved in governmental and political activities (Almond and Verba 1963; Kavanagh 1972; Rosenbaum 1975). On the whole this political attitude matches democratic political structures. A governance approach to climate change adaptation will be very effective under this political culture, given that people usually adopt participant attitudes towards political objects.

The political culture of the UK is an example of this participant type, although it is claimed to have a mixture of both a subject and a participant culture (Almond and Verba 1963). It is considered that the British populations generally pay attention to the process of policy making and participate actively in the process (Rosenbaum 1975, p.60). As far as this participant political culture is concerned it is expressed in its well known participatory structure which determines people's responses to climate change. There are those who have voiced some sceptical views regarding the UK's climate policies (McLean 2008; Carter 2008; Pielke 2009), but in general the way of responding to climate change is evaluated as being progressive and successful in terms of timely responses and well-structured political actions through participatory culture (Tompkins et al. 2010; Biesbroek et al. 2010; Gawith et al. 2009). Given that the general orientation of the UK political culture is participant, it is rational to choose a governance approach for climate change adaptation which includes stakeholders and local

and regional governments in the decision making process thus ensuring that external advice is incorporated (RCEP 2010, p.37). It is claimed that all levels of actors from national government to those from the private sector play their political roles in governing climate change (UKCIP 2011; Gawith et al. 2009). The UK government leads the climate change adaptation policies with its efforts to engage multifaceted stakeholders using partnerships with private sector participants and establishing a public awareness system, for example the UK Climate Impact Programme (UKCIP) (Tompkins et al. 2010; Hopper 2009; Keskitalo et al. 2012). However, the efforts are sometimes successful and sometimes not. Although the UK demonstrates a participatory political culture, there are some challenges to participatory orientations towards climate change adaptation, therefore sometimes responses to climate change are government-lead (Kern and Bulkeley 2009). Compared to other countries, the UK government shares more authority with multiple actors in terms of climate change governance (Meadowcroft 2009; de Bruin et al. 2009; Termeer et al. 2011).

I have discussed three types of political culture based on a classification proposed by Almond and Verba. Parochial political culture is usually prevalent where traditional social structures are dominant; subject political culture is well observed in the behaviour of passive political actors; and participant political culture is congruent with democratic political structures. Among these three types of political culture, the Korean political culture is generally conceptualised as a mixture of subject and participant (Lee 2003). Both the UK and the South Korean political culture are a mixture of subject and participant orientations; however the cultures are expressed differently in their political activities. It is likely that the South Korean political culture is more of a subject-oriented political culture.

It is claimed that people with such subject-participant political cultural attitudes accept the norms of a participant culture uncritically and without a confident sense of legitimacy (Almond and Verba 1963, p.25). It is interesting to examine how such a cultural orientation influences the governing of climate change adaptation and the procedural behaviour in decision making of political actors. When we make a choice and behave in a particular way in our lives, we are

oriented and influenced by values, norms and ethical and spiritual standards. Similarly political culture is generally observed and expressed in political behaviours towards political objects (Rosenbaum 1975).

This study will take political culture as a factor which explains the procedural characteristics of decision-making (Stone 1989; Wildavsky et al. 1997; Rootes et al. 2012), regarding climate change adaptation policies. I assume that in the context of climate change adaptation, the types of political culture can be interpreted with reference to three types of governance approach, namely: state-lead governance, state-tiered governance, and state-supported governance. The theory will be discussed in detail later in this chapter. Before proceeding to the section on the relationship of theories of political cultures to governance types, it is necessary to briefly discuss their general concepts and their historical, cultural and political origins in the South Korean context.

3.2.2. The value of adopting a political cultural approach

The reason I adopt a political approach for my research is that political cultures are the general political orientations which overarch political traditions, customs, nationality and citizenship and individual values and beliefs. They have been framed through historical and social events over a long period of time. Such political cultures play an important role in their member's political action and inaction in the political systems.

In order to enhance the effectiveness of policies, political culture needs to be taken seriously. For example, a comparative study regarding nuclear power policies in the United State and South Korea highlights the fact that people in these two countries feel differently towards nuclear power (Jasanoff and Kim 2009). Taking account of individuals' orientation towards nuclear power, the two countries approach nuclear power policies differently: the USA focuses on effective containment; by contrast, the South Korean government leads people to see nuclear power as a tool to achieve national development and indigenous nuclear technology (ibid). As such, people's orientation towards political objects and the characteristics of political cultures are important in the formation and

implementation of policy. This example is a case of how political culture can be taken advantage of in order to deliver government policies.

There is another study which indicates how political culture influences the choice of policy types in South Korea (Kim 2011a). The study examined the process of making the policies of GMO (Genetically Modified Organism) of South Korea and found out the techno-authoritarianism of policy makers hampered precautionary approach to regulation of risk assessment of the GMOs (ibid). The author of the study argued that the assessment process, long-term risk assessment, a participatory risk assessment, LCA (Life Cycle Assessment) and tracking historical records are not sufficiently institutionalized because of the culture (Kim 2011a). The study shows that such a new policy as control of GMOs is adopted, the process of making decision follows the routine of policy making in the society.

In support of this I cite a case related to climate change and how climate change policies are shaped in a certain political culture. A case study in the Rakai District in southern Uganda shows how different cultural styles of participation affect the interpretation of the forecast and the formulation of response strategies in climate change policies (Roncoli et al. 2011). The study highlights the importance of the cultural aspect in the practice of adaptation arguing that the political culture of local people should be considered as a critical factor in the delivery of climate change adaptation, because participation in the political activities is shaped differently depending on cultural norms of the people of different regions.

This study intends to investigate how South Korea responds to climate change adaptation especially in the context of a governance approach. As discussed thus far, political culture influences the procedural behaviours of political actors towards public policies and other political actors. Similarly, it is assumed that the behaviours and advice of members of the advisory board are also influenced by political cultures when they make their recommendations regarding national climate change adaptation policies. I will now identify the characteristics of the political culture of South Korea.

3.3. Political culture of South Korea

The general characteristic of South Korean political culture is authoritarianism created by a mixture of subject and participant political culture which is probably closer to a subject culture than anything else (Lee 2003; Lee and Lee 2007; Ringen et al. 2011). The term 'authoritarian' refers to 'the orientations of weak participants towards a different view and to a domination and suppression of the younger or subordinates' (Lee and Lee 2007, p.47; Janowitz and Marvick 1953). Such an authoritarian political culture is considerably influenced by Confucianism which was first introduced in the Joseon Dynasty³. Therefore when discussing the political cultures of South Korea, it is essential to explore the influence of Confucianism. Since it was introduced into Korea by the Joseon aristocratic class, it has determined the ethical standards of all the social classes of Korea and not only the aristocratic class. Familism and the filial culture of Confucianism became the root of the patriarchal systems. Under the patriarchal system, the younger should obey and respect the older and the higher in power request obedience from the lower. The culture of familism and filial culture also remains in the regionalism and kinship in present South Korean culture, so people choose candidates from their home turf rather than from some other region. Owing to these characteristics, authoritarian political cultures are likely to suffer from an abuse of power and a lack of accountability (Dalton 2005; Lee and Lee 2007). It is certain that such authoritarian attitudes of government officials will hinder democratic decision-making about policies (ibid). It is likely that such political cultures adversely act on a governance approach to decision-making regarding climate change adaptation.

This authoritarian political culture has been blamed for creating the history of past dictatorships in South Korea. This history results from the subject political culture combined with Confucianism and its profound influence on cultures in South Korea (Lee 2003; Lee and Lee 2007; Ringen et al. 2011). In addition to Confucianism, anti-communism is alleged to have legitimized the dictatorships. If someone has negative attitudes towards the state, he could have been tagged as a communist. And communism is regarded as an anti-social ideology

³ Joseon Dynasty (1392~1910)

in South Korea. After the Korean War, anti-communism became a critical part of political and social culture in South Korea (Lee 2003; Lee and Lee 2007; Ringen et al. 2011). Table 7 describes the political structures under the presidents after South Korea was established in 1948 through to 2013 (Ringen et al. 2011). South Korea has experienced quiet a long period of authoritarianism from the early 1960s to the late 1980s.

Table 7: South Korean Government Regimes (Source: Ringen et al. 2011, p.2)

Types of government regime	President	Time
Tentative democracy	Syngman Rhee	1948~1960
	Yun Po-son	1960~1962
Hard Authoritarianism (Military government)	Park Chung Hee	1963~1979
Stop-gap president	Choe Kyu-ha	1979~1980
Hard Authoritarianism (military government)	Chun Doo Hwan	1980~1987
Re-democratization	Rho Tae Woo	1987~1993
	Kim Young Sam	1993~1998
Democratic consolidation	Kim Dae Jung	1998– 2003
	Roh Moo Hyun	2003–2008
	Lee Myung-bak	2008~2013

(Note: The typology in the table was conceptualised by the original authors)

Another characteristic of South Korean political culture, conventionalism or conservatism, is rooted in Confucianism (Lee 2003). A conservative political culture is that oriented towards keeping social customs and is hostile towards diversities or differences. Climate change adaptation is a novel political agenda which may challenge the state-led policy style. To reform the conventional attitudes of responding to climate change which must be faced because of the unprecedented impacts posed by climate change; this challenge is made all the more difficult by the fact that if policy makers have a strong orientation towards conservatism or conventionalism. Adapting to present or future climate change, especially in a precautionary way requires agreement through openness of various policy options and sharing information with the private sector in order to generate more appropriate adaptation options which builds adaptive capacity (Adger 2003; Folke 2006; Finan and Nelson 2009). Therefore, the way and the extent to which conservative political culture influences the formation of climate change policies needs to be investigated.

Scholars argue that many South Korean government officials or civil servants have authoritarian or bureaucratic attitudes rooted in Confucianism (Lee and Lee 2007). The parochial attitude underpinned by Confucianism accepts the idea that the rulers are chosen by heaven (*god*) and it provided the rationality for the past dictators, reduced resistance from the people and created the past dictatorships (Lee 2003).

In addition to Confucianism and anti-communism, anti-Japanese attitudes are characteristic of South Korean political orientation. Its attitude was generated from the history of Japanese colonization. These attitudes are now much weakened but still have some influence on political cultures in South Korea (Ringgen et al. 2011; Lee and Lee 2007; Lee 2003; Lone and McCormack 1993). Unlike anti-communism and anti-Japanese attitudes, Confucianism can undermine the effectiveness of climate change adaptation. Because of its tendency to stabilize a society, Confucianism frequently resists against social and systemic changes. However, it has been argued that democratic and participatory governance is critical for effective practice of climate change adaptation (Adger 2003). Accordingly, Confucianism which is seen to be in opposition to liberal social systems and generally contextualised as a non-democratic ideology (Lee and Lee 2007) is likely to adversely impact on climate change adaptation.

As discussed so far, political culture of political actors influences the formulation of policies and the procedure of decision-making. This theory can be applied to the empirical research of climate change adaptation. For a further development of the theoretical framework for this research, I attempt to integrate Almond and Verba's three types of political culture with the governance type as integral to a discussion of effective climate change adaptation in the following section.

3.4. Integrating theories: political culture and governance

I attempt to identify relationships between political cultures and governance types as they tackle issues associated with climate change adaptation. In order

to come to an understanding of the relationship between governance theories and political cultures, I conceptualise three types of governance which describes a level of development of civil society organization and that of the non-governmental sector in a society. It is assumed that these governance types can be applied to societies when they formulate climate change adaptation policies in accordance with their political cultures or the political attitudes of the people. Three types of climate change adaptation governance are conceptualised as state-led governance, state-tiered governance and state-facilitated governance.

The first type, state-led governance is appropriate for a society mainly showing the characteristics of parochial political cultures. Members of these societies hardly understand their roles in political systems and do not even have appropriate capacities to perform these roles. A governance approach to climate change adaptation policies in a state-led and top-down political structure is a challenge on account of a low level of political activity or a lack of political interest on the part of the private sector. Some states do not allow civil society organisations or non-governmental organisations to operate. Such political structures are usually seen in parochial or subject political oriented societies. If a governance system is applied to such societies, it is designed as state-led governance. In order to offset the strangle-hold of central government, appropriate governance instruments can be employed. The general public has a minimal knowledge of policies (here for climate change adaptation) and most do not know their roles in the political system or in some cases they are not allowed to have a role.

Governance is rarely taken into account when considering political objects under this political culture. Therefore, in the context of climate change adaptation, the power of central government is still strong and local governments are usually controlled by central government. Under such political structures, such governance instruments such as transnational networks or inter-municipal networks between local governments are located under climate change impacts.

A case study in north-east Brazil shows how traditional political structure can be transformed to participatory governance by encouraging local people to participate in the process of decision-making about adaptation. The region has been suffering from chronic drought over generations (Finan and Nelson 2009). Local coping strategies seeking to respond to extreme droughts were performed in a manner typical of parochial type communities: lay people acted as subjects of protection and support from the local governor's own charitable disbursements. Local people did not know their rights as citizens to receive relief from government (ibid). The parochial relationship between lay people and a local governor makes people passive actors in adaptation practice (ibid). Public policies with regard to adapting to drought are under the control of the local governor and frequently operate for his own benefits (ibid). In order to enhance the effectiveness of adaptation practice and to enforce democratic governance in the region, adaptation projects are carried out by transforming the traditional governance system and encouraging local people to engage in political activities and earn their civic rights through attending the process of collecting information and data for more effective adaptation strategies (ibid). That case study is an example of introducing participatory governance in a parochial political culture in order to increase local adaptive capacity.

The second type of governance, the state-tiered type can be applied to subject political cultural societies, where people are interested in outputs more than inputs of policies or in less active participants in the political systems. This typology of governance is borrowed from a term suggested by Kim and Kang as a type of governance for the environmental management (Kim and Kang 2004). Where people know and admit the role of government, this second type of governance can be employed to a society where the political culture is generally a mixture of subject and participant. As the political system is more democratic than that of a parochial cultural society, private actors are invited to the decision-making process. However, the state under this political culture is likely to be bureaucratic and exert a considerable influence over local government and private sectors. In order to adopt more democratic governance, the state will make efforts to invite diverse stakeholders and civil organisations by establishing partnerships or providing public forums. For this type of

governance to be effective, populations should be cognitive of climate change adaptation and have the capacity to evaluate policy options.

Political culture \ Governance	Parochial	subject	participant
State-led	✘	✘	
State-tiered		✘	✘
State-facilitated			✘

Figure 1: Relationships between political cultures and governance types for climate change adaptation (Source: Made by the author of this thesis)

And in the third type, that is state-facilitated governance, central government has less power over political objects of the participant political culture than in the other two types of governance. Policy-making about climate change adaptation is known to diverse political actors including members of the private sector and evaluated by their active participation in the decision-making process. The state will set up a policy goal for climate change adaptation through sharing information and collecting ideas from multi-faceted actors in the process of decision-making. The role of government is much reduced; the main role of central government is to invest in science and technology for providing accurate data and resources for making climate change adaptation strategies. Political actors representing the private sector will actively participate in the process of policy making from determining policy issues to the monitoring and evaluation of the implementation of policies, as they have the capacity to evaluate and understand climate change adaptation policies. This type of governance is appropriate to the most democratic structures and is congruent with a participant political culture. Table 8 summarises the above discussion of matching governance types with political culture and suggests examples of governance tools. These are suggested taking account of political cultures or political structures.

Table 8: Types of governance for climate change adaptation matched to political culture (Source: Made by the author of this thesis)

Types of Governance	General Features of society	Examples of potential governance tools
State-led	<ul style="list-style-type: none"> The society may have parochial and subject political culture Authoritarian political structure Hierarchical and bureaucratic government 	<ul style="list-style-type: none"> Transnational networks Inter-municipal networks Inter-organisational networks (usually government institutions) Policy advisory committee system
State-tiered	<ul style="list-style-type: none"> The society may have a mixture of subject and participant 	<ul style="list-style-type: none"> Partnerships between government and experts Public forum for collecting private actors' opinions
State-facilitated	<ul style="list-style-type: none"> The members of the society have mostly participant political culture Government is the final decision-maker but the role of government is very limited: the state makes decision about policies by consulting the private sector; it acts as the provider of data and resources. Public has capacity to act in political systems; and participate in the process of decision-making 	<ul style="list-style-type: none"> Networks of NGOs or CSOs local governments as the local decision-maker about adaptation policies at local levels

3.5. Summary

This chapter discusses political culture as a theoretical background for the research. It highlights the importance of political culture in policy procedure and suggests the integration of governance to political culture in its approach to the analysis of climate change adaptation practices. And as an instrument for conducting an empirical study for this research, the political characteristics of case study area, South Korea, are analysed in the context of Almond and Verba's theory. The reason for choosing Almond and Verba's theory is that their argument is appropriate for explaining and matching political culture to a

democratic governance approach to climate change adaptation. The next chapter will analyse the climate change policies of South Korea on the basis of this theoretical framework and investigate the extent of political culture influence the formulation of climate change adaptation policies. For these objectives the following questions are asked: How does political culture shape the decision-makers' orientation toward climate change adaptation? And did the culture favourably or adversely act on the governance approach to climate change adaptation? These questions will be answered by analytically reviewing government documents and using semi-structured interview methods. The details of the methodology for this research will be discussed in the following chapter.

Chapter 4. Methodological framework

“the aim of an interview of a semi-structured interview is not to be representative but to understand how individual people experience and make sense of their own lives (Valentine 2005, p.111).”

4.1. Introduction

The previous two chapters, Chapter 2 and 3 explored the conceptual frameworks for this research: climate change adaptation and governance. Based on the selected conceptual frameworks, the list of interviewees was made and an interviewee guideline was drawn up. Following the conceptual framework chapters, Chapter 4 provides an overview of the methodological framework used in carrying out the research.

As introduced in Chapter 1, the aim of this research is to identify how a particular government is responding to climate change adaptation using governance as a framing device, and to explore the barriers and challenges observed in the process of making adaptation policies by interviewing policy makers and advisers. This chapter provides information regarding the methodologies used in answering the research questions and achieving the goal of the research: semi-structured interviews using as a case study of South Korea.

In order to identify the challenges and limitations applying to climate change adaptation, the interviewees' opinions and experience are investigated using a semi-structured interview method. The case study area is selected for the following reasons: South Korea traditionally exhibits a top-down culture in policy decision-making. The choice of case study as South Korea will provide the opportunity to carry out an empirical research to examine what practically happens when this culture of top-down policy making is directed towards climate change adaptation; and whether there are any efforts to adopt a

governance approach to decision-making about climate policies; and what challenges are identified in changing the policy culture to a multilevel governance structure. As all the interviewee and I speak Korean, I can make the point clear by understanding hidden meanings behind their answers and even their facial expressions. Speaking the same language as the interviewees has greatly facilitated the creating of a helpful rapport (Twyman et al. 1999). In addition, the knowledge of the social, political, cultural, economic and other backgrounds elements pertaining to South Korea was helpful in the practice of interviewing actors, although such as background knowledge can influence the impartial assessment and critical analysis of the interviews and hinder objectivity when viewing the situations under discussion (Mandiyani 2009). However, the fact that I am an overseas postdoctoral student and not a Korean-based researcher or government officer did help the interviewees to express their own opinions as much as possible.

The reason a semi-structured interviews were chosen is that closed questionnaires are not appropriate for this research for two reasons: firstly, climate change adaptation is a broad and wide subject and it was not possible to narrow it down to some defined categories of responses. Secondly, closed questionnaires cannot provide deep and open opinions about their experience in making national adaptation policies. Therefore it was felt to be better to use a qualitative and semi-structured method interviews for this research.

In general three methods form the structure of this case study: critical analysis of literature and policy documents as a preliminary data collection; interviews (mostly face to face with recorded with the permission of the interviewees), and qualitative interview data analysis. The background socio-cultural, climate and topographical characteristics of the case study area are briefly described before beginning a justification of the methodology used.

4.2. Description of the case study area

As an empirical study regarding adaptation governance in the context of climate change, South Korea was selected. South Korea has made progress in devising

climate change policies, including adaptation policies, but this has been over a short time period. The South Korean government created the first legal basis (the Framework Act on Low Carbon, Green Growth) for the purpose of enhancing the implementing climate policies (Jeon 2010a). The case study will provide the opportunity to examine if the progress made in South Korea is good or bad from the perspective of governance approach to making policy decisions. It is worth investigating what the driving forces behind the progress in climate change policies in South Korea really are. As argued in Chapters 2 and 3, multiple actors from various sectors and levels should be engaged in decision making, if there is to be successful climate change adaptation. It is a fact that there is no empirical study regarding climate change governance as practiced in South Korea. This research will be the first to approach climate change adaptation from the perspective of governance in South Korea.

A case study is used in order to investigate and obtain an understanding of the complex social phenomena (Yin 2003), and the process of dynamic and complex climate change adaptation from the perspective of governance. This research seeks to investigate how South Korea is responding to climate change adaptation from the perspective of governance, and to identify challenges and limitations to the process of governing climate change adaptation. By taking this as a case study, it has been possible to investigate the actual conditions of making climate change policies in South Korea, and to analyse the opinions of participants; and then to generalise out to other regions with similar development histories as South Korea. Before beginning to discuss the details of the interviews, the next section will explore the features of South Korea in the context of its socio-economy, culture, climate, and topography.

4.2.1. Social and cultural aspects of South Korea

South Korea is a democratic republic with a presidential system (Korea 2012). The South Korean government is comprised of three independent branches: the legislature, the judiciary, and the administration (ibid). After Korea was liberated from Japanese colonisation, it underwent a civil war and political instability. In spite of these unfavourable conditions, South Korea has achieved rapid

economic growth and is now 34th in the world in terms of Gross Domestic Product per Capita (IMF 2012). Along with the economic growth, the benefits associated with citizenship and lifestyles have much changed. Responding to public needs to engage in policy procedure, the South Korean government launched on a system of local autonomy in 1991, and five years later in 1995 local governments were operated by directly elected mayors, governors and municipal assemblies (Korea 2012). Henceforth, adopting the Local Agenda 21, public engagement was recommended in the process of making policies (Eun and Oh 2009). However, weak financial capacity, and a lack of professional knowledge about policy making, held public back from engaging in the policy decision-making (Park 2010a; Huh et al. 2008). In addition, there is a deep-rooted socio-cultural ethos. Social norms in South Korea are based on the idea of loyalty and filial piety rooted in 'Confucianism', and traditional Korean social values put a high priority on internal and mental influences (Hwang 2009; Park 2010a). Loyalty and filial piety are interpreted in such a way that a person should devote himself to the nation-state and respect his elders. Standing against the state (state policies) and the older people might be treated as being morally compromised. Under the influence of this traditional and socio-cultural background, it is not easy to express one's opinions, especially antagonistic opinions.

Attempts to include the public in the process of the development governmental policies had been made by the previous Rho government (from 2003 to 2008). However, Western-born liberalism collided with deep-rooted bureaucratic inertia in Korean society, and premature civil organisations did not succeed in playing their role in participatory policy process influences (Hwang 2009; Park 2010a). When the government makes a big urban development plan, it is legitimised by requesting public opinion through public hearings or other types of public awareness initiatives (Kim 2010). However such consultations are not properly announced to stakeholders or are occasionally, just to abide by the regulations without substantial public engagement. Such socio-cultural characteristics can reflect on the policy process. Some scholars suggest that the Korean type of network system is more effective than the western type of governance non-governmental organisations for compensating for the low level of capacity of non-governmental organisation (Kim 2001; Park 2010).

As climate change adaptation in South Korea is treated as an environmental policy and managed by the Ministry of Environment, policy making is determined somewhat differently. But the decision making structure of climate change policies is not much different from the general policy making process. Figure 2 describes the general process of policy making in South Korea (Jeong 2003). In the figure, the solid lines show that policy agendas are proposed or ordered and controlled. The dotted lines are unofficial interrelationships between policy proposer and policy makers (Jeong 2003, p.112). If there is litigation in the process of decision making, the judiciary can be involved in the procedure (ibid). The final decisions on national policies is agreed in a cabinet meeting; however, in the case of environmental policies, the final decision maker is the President of South Korea (Jeong and Byun 2011). It is the responsibility of the President of South Korea to decide whether the proposed policies can be optimised both in terms of socio-economic benefit and natural protection (Lee and Lee 2000).

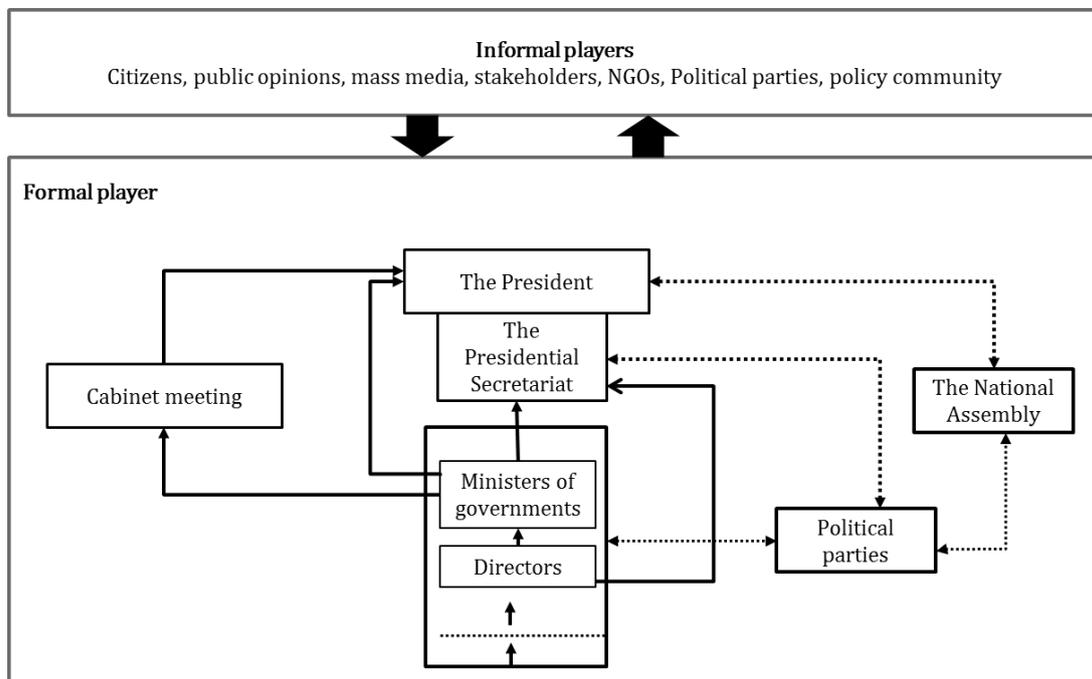


Figure 2: General policy making procedure in South Korea (Source: Translated from Jeong 2003, p.112)

As an environmental policy, climate change adaptation policies are managed by the Ministry of Environment and the Presidential Committee on Green Growth

which is located under the Presidential office and gives advice to the President about climate change policies (PCGG 2009).

4.2.2. Administrative structure and topography of South Korea

The present Korean administrative structure is composed of the Seoul Capital government, six metropolitan governments, one special autonomy city and nine DOs (Provinces) at the regional level, and at the local level (MOPAS 2013).



Figure 3: Administrative structures of South Korea (Source: Made by the author of this thesis)

South Korea is located in northeast Asia. The Korean peninsula is surrounded by the Yellow Sea to the west, the East Sea to the east and the South Sea to the south (Korea 2012). The Korean peninsula is roughly 1,030 kilometres long and 175 kilometres wide at its narrowest point. The land area of South Korea is 100,140 square kilometres. In the year 2009, South Korea had a population of 48.7 million. Mountains cover 70% of the land area (KTO 2013). The mountain range that stretches along the length of the east coast falls steeply into the East Sea, while along the southern and western coasts, the mountains descend gradually to the coastal plains; these produce the bulk of Korea's agricultural crops (ibid).

As the Korea peninsular is located in the mid-temperature zone, it has four seasons. Winter is cold and dry under the influence of a cold and dry continental high pressure system; summer is hot and humid because of the effect of the North Pacific anticyclone. In spring and autumn the weather is, for the most part, clear and dry due to the influence of a mobile high pressure (KTO 2013; NIMR 2009). Table 9 summarises general information regarding weather in South Korea. However, climate change is influencing the general pattern of weather in the Korean peninsula. For example, the length and pattern of the seasons in the Korean peninsula: the winters are from 22 to 49 days shorter and the summers from 13 to 17 days longer than 100 years ago (ibid). These calculations are based on a division of the seasons using temperature threshold methods (NIMR 2009). The details of currently observed phenomena or expected phenomena caused by climate change were discussed in Chapter 2 of this thesis.

Table 9: General information regarding Korean Weather Data (KMA 2013).

Weather element	Attributes
Temperature	Annual average temperature is 10~16°C except for the central mountainous areas where the mean maximum temperatures is 23 ~27°C and the mean minimum is -6~-7°C. (The data is based on continuous observations from 1971 to 2000.)
Annual rainfall	The central region receives 1100~1400 mm and the southern region 1,000~1,800mm. Seasonally 50~60% of the rain falls in summer.
Wind	Generally in winter the wind blows from the northwest and in summer from the southwest.
Humidity	The months with the highest humidity are July and August, 80% nationwide, and around 70% in September and October.

Rainy season	It generally starts in the middle of June in the southern area and extends to the central region in late June. The length of the rainy season is approximately 30 days.
Typhoons	Annually about 28 typhoons occur in the western North Pacific ocean, these directly or indirectly affect the Korean peninsula.

The social, cultural, and natural environments of South Korea have been described which can provide a general picture of Korean policy culture. In the next section the overall methodologies used for this research are explored in detail.

4.3. The framework of the research methodology

This research is composed of two key themes: climate change adaptation and the instruments of governing adaptation policies in South Korea, the conceptual framework has been explored in Chapters 2 and 3. The aim of this research is to explore how adaptation governance is working in the context of climate change and to identify the challenges if the governance does not work well. As stated in Chapter 1, the aim will be achieved by answering the research questions and addressing the following objectives. Table 10 describes the overall frameworks used for this research. By eliciting answers to the research questions, and using the prescribed methods of analysis, this research will achieve that goal.

Table 10: Research methods for investigating adaptation governance in South Korea (Source: Made by the author of this thesis)

Research Question	Methods
Main question: How does adaptation governance work in the context of climate change in South Korea?	Primary data: Semi-structured, open-ended interviews with government officials, advisory boards composed of experts, and local participants
Sub-questions: What is happening regarding climate change adaptation in South Korea?	Secondary data: systematic review of policy documents and textual analyses of the literature
What barriers are hampering the progress of governance approach to climate change adaptation?	

The following sections will describe the details of the methodological framework for collecting data: how to collect secondary and primary data using systemic

reviews of documents, the method of selecting interviewees, the practice of the semi-structured interviews and analysis of the interview data.

4.4. Methods of Data Collection

In addition to conducting interviews as collecting primary source, climate change documents published by the South Korean government and government institute are analysed as the secondary data which also are used to provide information who are included in the interviews. The documentary sources are obtained from governmental climate change policies, official government reports, national laws and regulations, departmental climate change policy documents, and relevant literature. The documents are analysed from the perspective of conceptualised frameworks in Chapter 2 and 3 of this thesis.

4.4.1. Analysis of documentary sources

Documents deriving from the government, official documents published by governmental institutions and binding regulation and rules are critically analysed for the purpose of knowledge about South Korean climate change and providing the preliminary basis for interview questions (Bryman 2004, pp.380-397). Analysing the documentary sources focuses on the contextual meaning under the conceptual framework of climate change adaptation and governance from the perspective of political culture; it provides background knowledge of climate change policies and policy culture which appeared in the process of decision-making about climate change policies in South Korea. Content analysis which was originally used for interpreting the Bible (Hoggart et al. 2002) is used for analysis of the documents under the theme of governance and climate change adaptation. Through the document analysis it is possible to understand the social, cultural and historical aspects as revealed by these documentary sources (Bryman 2004, pp.380-397; Hoggart et al. 2002; Patton 1980).

Most of the documentary sources regarding climate change policies and sciences are published by government and governmental organizations so that

the documents may well reflect the governmental points of views. The list of documents is provided at Table 11. Analysis of the documents should be critical and objective as far as possible and should be supplemented by referencing interviews and relevant news articles. Newspaper articles will add details of factual information about arguments made by interviewees.

Table 11: The Secondary source of data (Source: Made by the author of this thesis)

Document Title	Publisher
The 3 rd General Coping Strategy for Climate Change Conference	The Committee for Convention on Climate Change
The 4 th General Coping Strategy for Climate Change	The Committee for Convention on Climate Change
The Master Plan for Climate Change Adaptation (2007)	The Ministry of Environment
The Strategy for Green Growth & Five Year Action Plan	The Presidential Committee for Green Growth
The National Climate Change Adaptation Measures (2011-2015)	The Ministry of Environment
The National Action Plans for Climate Change Adaptation (2010)	The Ministry of Environment
The Climate Change Coping Strategies of the Ministry of Food, Agriculture and Fisheries	The Ministry of Food, Agriculture and Fisheries
The Climate Change Basic Strategy of the Ministry for Food, Agriculture and Fisheries	The Ministry of Food, Agriculture and Fisheries
The Climate Change Impact on Health and Coping Strategies	Korea Center for Disease Control and Prevention
The Framework Acts on Low carbon Green growth (FALG)	South Korea
Working papers published by the KACCC	the Korean Adaptation Center for Climate Change

4.4.2. Type of interviews

The interview is the primary method used for this research, which is an excellent method of gaining access to information about events, opinions and experiences (Dunn 2000; Bryman 2004, pp.318-344). Through a form of conversation it aims to bring about an understanding of how individuals perceive and identify the procedure of making adaptation policies. Types of interviews are generally divided into three forms: structured, unstructured, and semi-structured (Dunn 2000). The structured interview or standardized interview (Bryman 2004, p.110) uses an interview schedule that typically comprises a list of carefully worded and ordered questions. Each of the respondents receive

exactly the same interview questions and in the same order. By contrast, semi-structured and unstructured interviews are flexible in terms of the questioning, the order and the contexts of questions (ibid). Interviewers using semi-structured interview techniques ask a varied sequence of questions and ask in-depth questions in response to the replies (ibid). Unstructured interviews use an interview guide or sometimes they do not use any formal guide. The interviews are unique to the topics or issues (Dunn 2000).

Table 12: Types of interview (Source: Modified form Dunn 2000, p.102 and Bryman 2004, p.113).

Types of interview	Features	Material used
Structured interview	It uses an interview schedule that typically comprises a list of carefully worded and ordered questions. Each interviewee is asked exactly the same questions in exactly the same order.	Interview schedule
Semi-structured interview	It uses an interview guide. The interview is organised through ordered but flexible questions.	Interview guide, sometimes an interview schedule
Unstructured interview	The questions are determined by the interviewee's response.	Interview guide

Among these interview types, this researcher chose semi-structured interviews for most of interviews and the unstructured type for some interviewees who were not bound by the questions listed in the guideline; instead they talked about wide ranging subjects. Through semi-structured interviews, interviewees can express their own opinions to the questions outlined in the interview guideline. Their opinions are diverse reflecting on their various occupational and professional backgrounds. The interviews were conducted by using a semi-structured interview guideline for the conversations to lead to an in-depth discussion, but encouraged them to keep to the points, and not range too widely from the key points of the research (Bryman 2004, pp.318-344). Structured interviews are not appropriate because it is not possible to predict how the interviewees would respond and organise the responses into certain categories. On the other hand, unstructured interviews are likely to depart in too many directions and it is difficult to generate any theories from the interviews (ibid). Therefore, the general interview methods employed for this research were semi-structured interviews.

An interview guide was framed before beginning to conduct interviews. However some of the interviews did not follow the interview guideline, this depended on the situation. The questions and the order of questions outlined in the guideline changed in accordance with the conversations at the interviews. For example, even though interviews were scheduled beforehand to take around one hour, sometimes unexpected circumstances occurred or unanticipated visitors appeared at the interview spots. In such cases, the interviewer could not help closing immediately without asking the rest of questions. When the interviewees were not directly engaged in the advisory board for national climate change adaptation policies, these questions were skipped or changed in accordance with their situations. The interview guide used in the interviews was written in Korean. It is given in Appendix II with a translated into English for the purpose of this thesis.

4.4.3. Positionality

By positionality is meant a strategy employed to contextualize research observations and interpretations (Cloke et al. 2004). As it influences the data collected, the researchers should present themselves appropriately for the situation (Rice 2009). I was the interviewer: in terms of this concept of positionality in the interview was: a middle-aged female, studying in a doctoral programme at a university in the UK, having working experience in one of the big (Chaebol) companies at a manager level, and having graduated from one of the three prestigious universities in South Korea. This positionality was helpful to attract attentions from my interviewees. Firstly, the fact of studying a doctoral programme at a British university would help me to receive positive replies when the interview was requested by electronic mail and telephone. People in Korean society recognise studying abroad as advantaged and privileged. However being a middle-aged female student does not give a good impression to interviewees, which may adversely influences on the interviews. Koreans generally perceive a middle-aged and single female as difficult to have conversation. Therefore when I practiced interviews, I intentionally exposed my identify of studying at an overseas university, working as a manager at the Chaebol company and graduating from the same university as the President,

which was in order to make interviewees think that they and I are in the same social group and might help to create a rapport with the interviewees. That was one way to induce the interviewees to take the interviews seriously, and not regard it as just a school project. The recent development of the social networking services (SNS) (internet-information sharing) in South Korea was also helpful to making interviewees respond to my request for interviews. On account of the rapid information sharing through SNS, government officials could readily accept requests from citizens. If they did not without giving a specific reason, the fact might spread over the networking service so quickly as to tarnish the name of that official (This information was volunteered by an interviewee). Also, the fact that my research is funded by the Korean government makes the interviewees recognise its importance and take the interviews seriously. Although my positionality is comparatively supportive what the government officials did not want was to be involved in a controversial situation or to be seen as taking responsibility; this sometimes prevented them from expressing in-depth opinions.

Most interviewees participated in this research belonged to, so called, the elite⁴ group in South Korea. When interviewing the elites, the positionality had to be formed in order to create an intellectual discussion environment which led to the interviewees thinking that they could also learn from the interviewer, that is, that there would be a bilateral flow of knowledge. However, most of my interviewees were older than this researcher. In Korean culture, the younger person is to be humble and listen to the elder, which is considered to be more polite than showing off knowledge in front of the elder. It was important to strike a balance between being humble and being knowledgeable (Moser 2008) when I conducted the interviews. Generally speaking, in the interviews my personality was that of a humble listener rather than a knowledgeable-presenter as Moser argues (2008).

⁴ There is no particular Korean word for 'elite'. Koreans use the English word elite to mean a group of people in a society, etc who are powerful and have a lot of influence, because they are rich, intelligent, etc (p.495). HORNBY.A 2005. In: WEHMEIER, S., MCINTOSH, C., TURNBULL, J. & ASHBY, M. (eds.) Oxford Advanced learner's Dictionary of Current English. 7th ed.: Oxford University Press.

4.4.4. Ethics

In advance of each interview, I requested consent of the interviewee to be interviewed. I informed them that their participation in the research would be voluntary and that the interview might be discontinued at any time, also that the data collected from the interview would be kept strictly confidential and would not be used for any other purpose than research (Refer to the consent form attached to Appendix 1). I practiced interviews in two phases. For the first round of interviews (from October 2010 to March 2011), the consent forms were not officially available on the spot because there was an implicit agreement that if they accepted the interview invitation, it meant that they had agreed to their participation in the research. However, when I undertook the second round of interviews (From October 2011 to November 2011), I explained the purpose of the research and requested the interviewees sign a consent form. When I came to Korea for the second round of interviews, I requested the interviewees attending at the first round to sign the consent form and received the signed consent forms as scanned files or paper documents. The consent form was written in Korean. Appendix 1 is the copy of the English translation of the consent form.

The whole process of research followed the ethics policy of the University of Exeter; the Code of Good Practice in the Conduct of Research, and respected the integrity of interviewees, and it was strictly adhered to at each stage of my research.

4.5. The Practice of the interviews

Based on the framework of methodologies, the interview guideline and consent form, semi-structured interviews were outlined and carried out. Most interviews were in practice as face to face conversations, except for two telephone interviews and one electronic mail response. The details of the practice of the interviews are explained in the following sections.

4.5.1. Selection of interviewees

The interviews took place over six months comprising two phases: (1) the first field work was carried out from the middle of October 2010 to the end of March 2011; and (2) the second was from the middle of October 2011 to the middle of November 2011. During the first phase, interviewees were selected from the lists of key authors of the National Climate Change Adaptation Measures (NCCAM) who work at the Korean Adaptation Center for Climate Change (KACCC), and key persons who lead climate change science and policy in South Korea. The reason for these choices was that they could provide a detailed account of the whole process of creating national adaptation policies. The plan was to interview 30 people for the first round of interviews, but some of the contacted individuals did not reply to my request for interviews or cancelled the interview appointment. I interviewed 14 people from the advisory board and 9 people from a list of climate change scholars who performed government-funded climate change projects. In order to make an interview appointment, the first contact was made by sending an email and one or two days later, I contacted the candidates by telephone using the numbers which were provided on their institutions' web sites. However, some of the candidates did not reply to the electronic mailings or did not provide telephone numbers at their institutions. In those cases, I sometimes used my personal network to contact them and receive an interview agreement. However, I realised that this personal network was not always helpful. In a couple of the cases of the interviews arranged using my personal network, the interviewees did not speak their mind or did not express in-depth opinions about the questions, and the interviews became token meetings. When the interviewees replied promptly to my request emails and suggested a potential interview time, the interviewees became actively involved in the interviews and expressed in-depth opinions.

For the second round of interviews, I contacted again the interviewees of the first round and more individuals who were members of advisory boards for national climate change adaptation policies. I contacted 55 people who were members of the advisory board (Ministry of Environment 2010, *p.xxv*) and received agreement for interviews from 14 members.

Most of the listed interviewees for both the first and the second phase belong to the elite group in South Korea: a high level of government official, doctoral degree holding professors and institutional researchers. As discussed in the 'positionality section', I made an effort to respect their reputation for the process of the interviews (Rice 2009).

Table 13: The interview category of the research (Source: Made by the author of this thesis)

Interviewee category		Number of Interviewees
State actors	Ministries	5
	Presidential Committee on Green Growth	1
	National Institutes	9
	Institutes funded by government	15
	Local Government official	2
	Local environment foundation	1
Private actors	University	5

Table 13 briefly describes the categories and numbers of interviewees. More details regarding the interviewees are explained in Appendix 3. The interviewees for this research are divided into two categories based on where they work: the first one is the government employees, and the second group is employees of private institutions. The interviewees of the government employee group are working at the departments of central government or government funded or affiliated organizations. The interviewees in the second group are professors or doctors acting as advisors or consultants who are recommended for the advisory board by the government organisations. The government employee category is sub-classified according to the types of the organisations: (1) the governmental ministries, where the interviewees work in central government ministries; (2) the national institutes which are owned by the state government; (3) the institutes funded by government which are partly funded by central government and partly local government or government affiliated organisations; (4) local government officials; and local Environment Foundations which are financially supported by the local governments; and (5) private actors who are academic researchers employed by the private

universities. As shown in the Table 13, most interviewees are partly or entirely employed by government. Even the second group are not entirely to be identified as private actors because the professors or researchers participate in projects funded by the government. They were selected as the members in the advisory board by the government.

4.5.2. Interview guide

An interview guide was drawn up for carrying out semi-structured interviews. According to the situation, the order of questions and the contexts of questions were changed introducing a measure of flexibility. The interview guideline was organised under three categories. The first category was questions requiring factual answers. For example, questions about which sector of climate change adaptation policies they were involved in making policies for; how long the interviewee had worked in climate change; or if he or she had engaged in making environmental or climate policies before the national climate change adaptation policies. Following the factual questions, interviewees were asked their opinions regarding the present national adaptation policies, and what they thought about the process of making national adaptation policies in South Korea. When the interviewees started to get involved in the conversation in earnest, interview questions developed into in-depth discussions. The key questions included barriers to and challenges facing making adaptation policies, and individual views on making climate change policies, and suggestions for improving the structure of making climate change adaptation in the future.

Based on the interview guideline, and with some changes depending on the interview situations, the interviews took place for six months over two years from 2010 to 2011.

4.5.3. Interviewing

Before proceeding with the interviews, I explained the ethics of the interviews: the interview should be voluntary and anonymous, and whenever they wanted,

they could discontinue the interview, and that the data would be used only for research purposes (refer to Appendix 2 of this thesis). If they agreed to participate in the interview, I requested the interviewees read the consent form and sign it. And I also asked them if they had any objection to the interview being recorded. Except for three interviewees (Interviewee No.1, Interviewee No.22 and Interviewee No.25), the rest of the interviewees agreed to be recorded.

Most interviews took place at the interviewees' work place, where the interviewees wanted to have their interviews. However, three interviews were held in different environments: interview No.11 at a coffee shop; interview No.37 at the National Assembly House of South Korea; and interview No.41 at a hotel where the interviewee attended a conference. I preferred to have the interviews at their office assuming that the interviewees would feel comfortable and would have a relaxed conversation during the interviews (Valentine 2005). However, the work place of the interviewees could not always provide a comfortable or quiet environment for holding an interview. When interviewees shared an office with other colleagues or their supervisors were working in the same office, interviewees seemed uncomfortable and did not fully express their opinions in the ensuing conversation. There were other disadvantages when the interviews took place at the interviewee's office; for example, frequently, interviews were interrupted by telephones or visitors. In general the ideal situation is for the interview to be held a separate meeting room located inside the interviewee's organisation so that the interview is not interrupted and the interviewee feels comfortable and relaxed.

As explained in section 4.5.1, the research interviews took place over two phases. When I began the interviewing, it was the time of year-end reporting and national holidays. Some of the interviewees cancelled their interview appointment and changed the interview dates. When I had interviews, the interviewee sometimes forgot the interview appointments and had other meetings, or they ended the interviews after less than 30 minutes on the pretence of other urgent businesses. I scheduled to conduct interviews from the end of October 2010. But I realised that this season was the busy time for most interviewees who worked for national institutions and government offices; it was

the time to submit annual reports and to have December year-ending meetings, and January year-beginning meetings. In addition, it was time for people to celebrate the Christmas holiday, year-ending and year-beginning holidays, and a Korean traditional holiday. As a novice researcher, I made the mistake in choosing a bad time for fieldwork and interviews.

For the first phase, the interviews were intended to follow the guide exactly without going into an in-depth discussion in most of the interviews. When the interviewees were losing interest in the interviews or reluctant to answer questions, I felt embarrassed and hesitated to continue the interviews or even asked if they wanted to stop. When the interviews were interrupted by visitors or phone calls, I had difficulty in directing interviewees to returning to the interviews. The mistakes resulted in superficial data collection. It became necessary to do more in-depth and supplementary interviews.

After finishing the first round of interviews and preliminary data analysis, I decided to proceed with the supplementary interviews. The second round of interviews was scheduled to take place for one month from the middle of October 2011 to November 2011. The reason I chose this period was that South Korea has a traditional holiday early in October; and after the end of November in 2011. This had a bearing on the time I chose for the second round of interviews. For the second round of interviews, I made interview appointments before departing to conduct field work. During the second phase, I could collect more diverse and in-depth opinions regarding climate change adaptation and the policy making process in South Korea. Compared to the first phase, I felt that I could manage the interviews with more confidently and that this made interviewees feel more at ease and able to express their thoughts more freely.

As this research focuses on change adaptation on the national rather than the local level, local actors were not selected for the interview lists. However, a couple of interviewees talked about successful local climate change policies. Therefore, I contacted local actors in three cities; people based in Seoul City, JEJUDO, and ANSAN City. I telephoned the persons-in-charge of climate change policies in Seoul City, JEJUDO special authoritative sector, and ANSAN

City. Of these three local actors, the person-in charge of climate change in Seoul city did not want to be interviewed, claiming that Seoul city was in the process of making adaptation plans at that time (in November 2011). The two people from the other cities gladly accepted the invitation for interviews. I asked questions which were slightly different to those outlined in the interview guide, and which had a more local focus. When the local actors were asked about climate change adaptation, it became apparent that each of them was not aware of the concept but recognised climate change policies as only reducing emissions. Therefore the questions were about the local climate change policies rather than climate change adaptation: who initiated policies to cope with local climate change; what were their roles in the policies; and if there was public engagement in making climate change policies? Local actors were not well informed about climate change adaptation.

The method of interviewing was face-to-face methods except for one electronic response, and two telephone conversations. The total number of interviews was forty-one. On average each interview lasted 40 minutes, with the shortest lasting a mere 10 minutes and the longest 75 minutes. The shortest interview was due to the illness of the interviewee. In the longest interview, the interviewee talked about many subjects, and some of which were not even related to climate change policies. The average travel time was more than three hours for each interview with six hours by train as the longest.

Most interviews were audio recorded as agreed with the interviewees, but some of the interviewees did not want to be recorded, and for two interviews mishandling of the recorder meant that the interviews were not recorded. When I could not record the interviews, I transcribed the interviews by hand. After each interview, I made notes of key points about the interviews and the environment of the interviews. These notes were helpful when coding the interviews. Transcriptions could not provide the feelings and facial expressions of the interviewees. When I completed each interview, I transcribed the audio recorded interviews, usually on the same evening when I came back home. But if that was not possible, I finished transcribing no later than within a week of the interviews having taken place. For one interview to be transcribed, it took four times as long as the interview itself. The tedious but important transcribing of

the interviews was repeated more than three times in order to prevent missing essential dialogue. Whenever I completed an interview, I always expressed my gratitude electronically (Valentine 2005).

4.6. Analysis of interview data

This research was designed to explore the current situation of adaptation policies and the perceptions of policy makers from the perspective of governance in South Korea. Understanding climate change adaptation in the context of governance required an examination of policy documents across the full range of political, social and economic considerations. Interviewing participants involved in the making of climate policies can provide information about how climate change adaptation and the role of governance are perceived by them in the process of making national policies. The data collected from the research are qualitative data which can help to answer the research questions and thus achieve the objective of the research (Ritche and Spencer 1994).

The collected qualitative data are categorised, and coded as a basis for theorizing them (Strauss and Corbin 1998). Analysing interview data began with identifying the concepts repeated most frequently (codes), and these coded concepts are grouped under categories based on the concepts that pertain to the same phenomenon (Corbin and Strauss 1990; Strauss and Corbin 1998). Coding is a key process to generating a theory based on any research (Bryman 2004, pp.398-416). In the process of coding the interview data, I made efforts not to fragment the conversations arbitrarily and tried to understand the whole sequences. The categories for coding were drawn from the conceptual frameworks and the research questions: negative attitudes towards the process of decision making; complacent attitudes towards the general procedure of policy making; and neutral opinions which are not negative or not positive but just providing information. The categories were grouped so as to identify the repeated themes and conceptualise in order to generate a theory (Maxwell 1996). The coding of the data was performed by using the QSR Nvivo 9 computer programme.

The data collected from the interviews were particular to South Korea, but with the process of generating a theory, it becomes abstract and general so that it could be transferable to climate change adaptation governance in other countries where the civil organisations or private actors are not sufficiently to participate in policy decision making.

4.7. Summary

This chapter has given an overview of the analytical framework of my research methodology. Table 14 shows an overview of the methodology used for this research. Data were collected using qualitative and semi-structured interviews over a period of six months from thirty eight interviewees. The collected data were analysed using open-coding and classifying coding methodologies, in order to explore and answer the research questions.

Table 14: Overview of the research methodology (Source: Made by author of this thesis)

The study	Adaptation governance in the context of climate change in South Korea
Type of Research	Qualitative, exploratory, contextual, grounded theory
Aims or objectives	To examine adaptation policies in Korea To identify the challenges in making policy To generate a theory regarding a multilevel governance system in climate change adaptation
Interviewees	38 individuals (refer to Appendix 3 of this thesis for the details of interviewees)
Type of Interview	In-depth, semi-structured interviews
Time-scale	5 months (November 2010 to March 2011) and one month (October 2010 to November 2012)

This case study aims to examine the climate adaptation governance system in South Korea, using in-depth interviews to elucidate the process of making policy. The interviewees were selected from the group of experts who attended meetings to make climate policies in South Korea. Although this research is carried out only in one country and is a single case study, the findings could be transferable to other cases if they are selected carefully (Baxter 2010; Yin 2003).

From the following chapters, the analysis of the data based on the methodology considered in Chapter 4 will be discussed and analysed. First, Chapter 5 focuses on a comprehensive and systematic review of policy documents and

literature regarding climate policies in South Korea. The following Chapter 6 and Chapter 7 discuss this analysis of the interview data.

Chapter 5. Structure of climate change policy in South Korea

“Building a safe society through climate change adaptation and supporting green growth (Ministry of Environment 2010, p.vi).”

5.1. Introduction

As is happening elsewhere the reactions to climate change have been concentrating on mitigation rather than adaptation: therefore the political discourse regarding climate change adaptation has lagged a little behind mitigation in South Korea (Han et al. 2008; Han 2007). Increased frequency of extreme weather events and pressures from international agreements encourage politicians to show a greater interest in making policies about climate change adaptation in South Korean (Han 2007). By examining the process of adopting climate change adaptation measures, this chapter aims to use empirical arguments which demonstrate how political culture influences the development of general climate change policies; this will be done by analysing secondary material. These consist of policy documents, reports related to climate change published by governmental institutions and relevant literature. This analysis shows what is missing in the process of the development of national adaptation policies and the characteristics of political culture which have influenced decision-making regarding climate change adaptation. In order to achieve these aims, this chapter focuses on the stage of initiating and setting-up a policy agenda and the decision-making process. In addition, this chapter will analyse the contents of policy options listed within the National Climate Change Adaptation Measures (NCCAM), and examine the institutional structures for implementing the policies.

The analytical framework of this chapter is a mixture of two approaches; the first approach analyses policies in terms of a process beginning with agenda-setting and decision-making; and the second focuses on power and its distribution among groups and elites and the way this shapes policy-making (Parsons 1986,

p.39). The first analytical focus is on the procedural characteristics of initiating climate change policies. How did the peripheral policy item (here climate change) gain interest and become a policy agenda? Who or what initiated the policy agenda-setting? And at the stage of decision-making, how were policy options decided? These questions will be answered by investigating documents. The second approach focuses more on the distribution of power as it affects the procedures of climate change policy making. With regard to the institutional structures overseeing climate change policies, who is the practical power-holder? To what extent is decision making shared among participants? The main research materials are policy documents or working reports published by government or governmental organisations; this does not include any primary research data. Therefore the analysis may have limitations in terms of depths. Using the two approaches I will investigate what has happened during the process of making climate change policies in the perspective of political culture.

5.2. Styles of policy making in the context of climate change

This section investigates the way climate change became a policy agenda and who made decisions about policy options. It is done from the perspective of political culture and political structure. By analysing documents, I will find out who and what has been missing in a context of participatory governance. In analysing this process the practical delivery of policies is not considered; because climate change adaptation has just begun in South Korea there are no official documents regarding it. The secondary materials used for this chapter are listed in Chapter 4. Here I argue that what is missing is the participatory element in the governance of climate change policies; basing my assertions on an analysis of these documents.

5.2.1. Initiating climate change adaptation policy

As the reason for directing attention to climate change adaptation is examined, three things are generally addressed; the commitment to Article 4, Clause 1 (b) of UNFCCC as a member party of this international body; growing public

concern regarding increased damage caused by more frequent extreme weather events; and politicians' awareness of the impacts. However, it is necessary to examine these reasons carefully. In fact, the pointed first reason was not practical key driver for promoting policy makers into taking actions. The climate change-related policies were initiated for the commitment to the UNFCCC but to cope with the impacts of climate change. The increased damage caused by extreme weather events did not play as key focusing events either. The damages produced knee-jerk reactions. When big natural disasters as floods and typhoons occur, people pay attention to the incidents. However, as time goes, people lose interests and do not make policy makers adopt proper coping strategies or policies. According to the research sources, substantial progress in climate change adaptation policies began with a new government. Taking account of these facts, I discuss the procedural characteristics of agenda-setting and decision making about climate change adaptation in more detail, and answer the question-what is the key actor?

A state chooses a policy agenda taking account of policy issues, the process is usually led by powerful groups motivated by certain political conditions (Kingdon 2003). In South Korea, the President plays a crucial role in deciding the political agenda in responses to social issues (Jeong 2003). In South Korea, whenever, a new president is elected, there is usually a big change in the key political agendas. Taking account of such a political culture, this section explores what actually initiated the making of climate change policies and who really was behind it.

The literature shows that the beginning of making climate change policies in South Korea was the intentions of preparing for international agreements, this was led by the central government (Han 2007; Jeon 2010a). Policy goals of the first and the second General Strategy to cope with Climate Change Conference support these arguments. The Strategies were formulated by a special committees composed of only high level of government officials, namely, governmental ministers chaired by the Prime minister (CCC 2006; Han 2007; Han et al. 2008). The General Strategy was updated every two years until the fourth one was drafted and succeeded by the Green Growth Strategy when the new government announced a national regime of 'low carbon and green growth'

(Korea 2008) .The general strategies focussed on how the government could negotiate the international agreements without doing harm to domestic industries. Figure 4 in Box. 5-1. describes the brief history of climate change policies made by the South Korean government by establishing a special committee. The committee system is generally arranged when governments face the need to handle new political agendas (Cheong 2003; Lee 2005a). The committee is expected to provide professional knowledge and share information between policy makers and experts. However, as most members of the committees are recruited from governmental institutions, there are those who are sceptical regarding the role of the committee as a genuine representative of public opinions (Lee 2005b; Kim 2009). Box 5-1 describes the committees employed by the South Korean government for climate change policies from the late 1992 to 2010.

Box. 5-1. The Summary of governmental committees for climate change policies

The Ministerial Commission on Global Environment was established in 1992 as the first governing structure for climate change policies, which seven years later was reformed to the Commission on Convention on Climate. The Commission on Convention on Climate Change was transformed into the Commission on Climate Change in 2001. The Commission on Climate Change existed until it was integrated into the Presidential Committee on Green Growth in 2008. The history of the Committee systems for climate change policies is illustrated in Figure 4.

The general structure of the Presidential Committee on Green Growth is not very different from that of the previous committees. It is composed of one high level board of decision makers on which government ministers are members, one steering board and one working group supported by groups of experts (Cho 2002; PCGG 2009). The key difference is that the Presidential Committee on Green Growth enforces the new national regime of green growth and low carbon (Kim and Lee 2010). The main role of the committee is to provide technical advice pertaining to climate change and green growth.

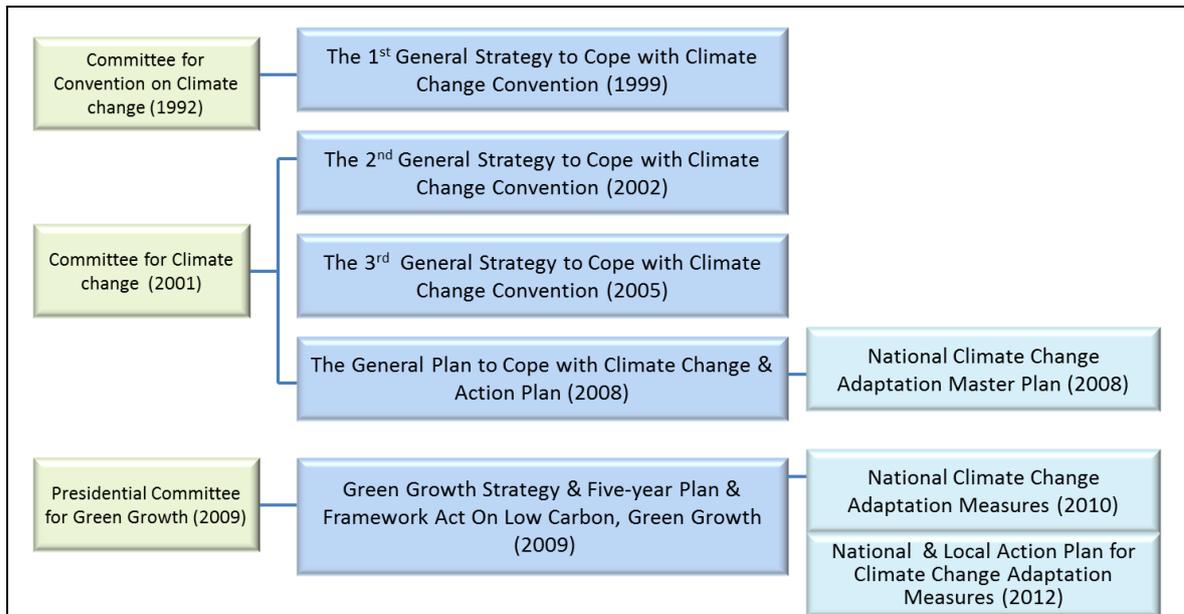


Figure 4: Climate Change Policies in South Korea (Source: Modified from NCCAM & Jeon 2010)

However, the committee members are selected from well-reputed persons who do not necessarily have expertise in climate change or sometimes work as duplicate members of other governmental committees. Besides, some of the members are selected to ensure compliance with the government directives and reflect the needs of government rather than representing public opinion (Lee 2005b). In order to reduce the power exerted on the committee by government, it adopted a co-chair system for the Presidential Committee with a view to building partnerships with private actors: one chair is the Prime Minister and the other is appointed from a NGO by the President. But there is concern that this the co-chair appointment system might not have produced truly participatory governance (Kim 2009).

Before the 3rd General Coping Strategy, the term, 'climate change adaptation' was not in use, nor were there terms with a similar meaning in climate change policies of South Korea. Not until the 3rd Strategy, did the government begin to set up a policy trajectory of building adaptive infrastructure among three trajectories (CCC 2006). The government feels the need to build infrastructure for climate change adaptation, it plans to invest 0.1% of its total budget in the 3rd General Coping Strategy for the purpose of assessing vulnerability and monitoring climate change (ibid). The experts' pool is established for providing technical and professional advice for creating the 3rd General Strategy. The critics point out that most of the members in the pool are working at working at governmental institutions (CCC 2006), it is obvious then that the consultation process is mere window dressing, a sham. Also it seems there are no participants from private sector, and if there are any, it is not clear regarding the

degree of their involvement in the initiation or shaping of the 3rd General Coping Strategy.

After the presidential election in 2008, the new government chooses, 'Low Carbon and Green Growth Society' as a new national paradigm (Korea 2008). Accordingly, there was a change in general political agenda-setting in the South Korea government. Most policies formulated were required to consider the paradigm. The political initiative seemed to make a positive impact on climate change adaptation. Climate change issues along with green growth are given more weighed on by this government than the previous government (Kim 2009; Yoon 2009b). Some documents argue that the increased economic and financial damages caused by natural disasters which are interpreted as being due to the adverse effects of climate change played in part a role in setting climate change as a policy agenda in the new government (Han et al. 2008; Jeon 2010a). However, there is no evidence that natural disasters make policy-makers initiate adaptation policies. On the other hand, according to a report, the general people know climate change but they do not have knowledge specific to climate change adaptation (Ministry of Environment 2007). Although South Korea has experienced extreme weather events, it does not mean that such events are working as focusing events in initiating the debate in policy discourses.

The Climate Change General Plan (2008) rationalises the necessity of establishing national climate change adaptation policies by citing international obligations and citing examples of the advanced actions of other countries (UNFCCC 2012). The contents of the policy documents show the variety of participants involved in the process of making the policy document. The projects in the policy document become very technical and concrete. Nevertheless the making of the policy is still initiated by top-down command by central government. As a party member of the UNFCCC, the South Korean government is obliged to take actions for adapting to climate change at a national and local level (the UNFCCC, Article 4, Clause 1 (b)). In response to this the Climate Change Committee decided to make a master plan for a national climate change adaptation (CCC 2008). Although there is recognition of taking action at the state level of the need to take action on climate change

adaptation, the climate change policy still focuses on reducing emissions of greenhouse gases rather than on adaptation.

After the binding law of the FALG was enacted in 2010, the government reformed and renamed the national adaptation master plan as the National Climate Change Adaptation Measures (2010). The NCCAM was proudly highlighted as the first statutory national adaptation policy. It works as a master plan for national and local actions plan for climate change adaptation (NCCAM). The NCCAM announced the vision of the national adaptation strategy as '*constructing a climate-safe society and supporting green growth*' (Ministry of Environment 2010, p.vi). Taking into account the fact that the government has set up 'low carbon and green growth' as a national paradigm, it is not surprising that the NCCAM includes the term 'green growth' in its vision. It seems that policy makers feel that it is their duty to use the term green growth no matter what is their policy objects are.

The driving force for creating climate change policies was international and national commitments entered into by the central government. The process of policy making follows the usual path of top-down and commanded by government, although climate change is a new policy agenda. It is evident that the state-centred political culture strongly influences agenda-setting and initiating climate change policies. If a variety of actors is excluded in the process from initiating climate change adaptation policies, then what happens during the process of decision making about policy options? The following section is a critical review of the NCCAM reports regarding the process of the decision making and in particular the NCCAM itself. The reason for this analysis focusing on the NCCAM is that there is a report on the process of decision making (Jeon 2010b); however there are no other reports specifically about the decision making process about other climate change policies which I investigate in this chapter.

5.2.2. Decision makers

When the South Korean government initiated climate change policies, it missed the opportunity to collect opinions from multiple actors. This, it is argued, might lead to narrow and near-sighted policy decisions. This section will argue about the missing points in the process of decision making and discuss how decision-making is shaped by the power structures and the way power is distributed among the participants. South Korean political culture is a mixture of 'subject and participant culture' in the context in which Almond and Verba, expresses authoritarianism and bureaucracy influenced by Confucianism. Such a political culture was observed in initiating climate change adaptation policies as discussed in the previous section. Then it is necessary to investigate to what extent such a political culture is expressed in selecting policy options and generating practical action plans. According to the documents, the government attempts to adopt interdepartmental cooperating mechanisms, institutional networks and advisory boards for integrating multifaceted opinions about the decision-making process with a view to enforcing participatory governance. I will examine how such governmental efforts worked in creating the NCAM. The discussion will begin by exploring this from the point of establishing a binding legal framework (the Framework Acts Low Carbon, Green Growth).

After the Framework Acts Low Carbon, Green Growth (FALG) became effective in accordance with Article 48 of the Framework Act on Low Carbon, Green Growth, it was required that within six months detailed implementation plans be drawn up; accordingly the ministries in central government were obliged to make the first statutory national adaptation strategy, which would be called the National Climate Change Adaptation Measures (Article 48 of FALG, Article 38 of Ordinance for the FALG). In order to make and implement the NCCAM, the South Korean government formed a consultative group which is coordinated by two institutions (the National Institute of Environment Research and the Korean Adaptation Center for Climate Change). The two institutions acting on the instruction of the Ministry of Environment made the draft of the NCCAM. According to a report about summarising the process of making the NCCAM, the drafted NCCAM was worded by researchers of two institutions and a group of experts - the advisory board (ibid). Through a series of meetings (according to the report), the field researchers decided on the draft NCCAM and held a symposium – a public hearing (Jeon 2010b). However, there is no information

about the detail of symposium; whether-or-not the attendees included private actors and what was discussed or raised as issues (ibid). After the event, government consultative groups were invited to give their opinions about the draft document and to adjudicate where there were conflicting opinions (ibid). According to the report, the adjustments were generally related to changes of expression or terms used in the policy options.

The objective of the NCCAM is to provide a master plan for the future practical adaptation measures at national and local level. As it reflects the objectives of its master the policy contents are very broad and abstract (NCCAM). As a follow-up of the NCCAM, government ministries and local government are required to make the detailed Implementation plans for Climate Change Measures based on the NCCAM. All government ministries should create department coping master plans by 2012, but only three ministries announced ministerial master plans (MIFFAF 2011; Ministry for Food 2011; Choi et al. 2010). The department policies are more practical, concrete and technical than that of the NCCAM.

I have explored the process of making the NCCAM for six months from April to October 2010 (Jeon 2010b). There are no details giving information about the attendees at the public hearing and how their comments were treated afterwards. Although various actors seem to have been involved in the decision-making process than was the case with the previous climate change policies, most tasks were completed by researchers working at KACCC; this included wording the policy and aggregating opinions from advisory boards. Analysing the overall process of decision-making about the NCCAM, the power seemed to be concentrated in the hands of a few groups of government officials in central government and groups of experts.

5.2.3. The methods employed in the creation of the NCCAM

The previous section discussed the power blocks shaping the process of agenda-setting and decision making with respect to climate change policies and the fact that it is an expression of the political culture. The vision of the NCCAM

includes the term ‘green growth’, even though the policy is not directly related to this agenda. Such an attitude on the part of both the policy makers and government-employed researchers involved can be interpreted as the expression of allegiant political culture to the governmental politics. In this section there follows an analysis of the decision making during the process of creating the policy contents listed in the NCCAM.

More than 51% of the national adaptation measures aim to build national adaptive capacity by scientific and technological development and by collecting data about climate change (NCCAM). Focusing on building data and scientific information is similar to how other countries operate. Australia, the UK, the USA, and European countries are also focusing on building adaptive capacity rather than delivering adaptive actions (Preston et al. 2011; Tompkins et al. 2010; Biesbroek et al. 2010). Most projects in the adaptation measures focus on scientific and technological development. This is similar to what was observed by Biesbroek et al. (2010) regarding adaptation strategies (Biesbroek et al. 2010). It is rational that policy makers generally should intend to have concrete evidence deriving from their decisions or clear rationales. To implement the vision of ‘*constructing a climate-safe society and support green growth*’, ten sectors set up sectoral adaptation goals. Table 15 describes the sectoral goals addressed in the NCCAM(Ministry of Environment 2010).

Table 15: The goal of Adaptations in South Korea (Source: Translated from the National Climate Change Adaptation Measures by the author of this thesis)

Sector	Policy goal
Health	To protect people from heat waves, infectious diseases, air pollution and allergies exacerbated by climate change
Disaster	To reduce damages through disaster prevention and social infrastructures enforcement
Agriculture	To transform agricultural system so that it becomes climate-friendly
Forestry	To enhance forestry vitality and reduce forest disasters
Coast/Fishery	To secure fisheries and reduce damages
Water	To secure water resource management systems from climate change
Ecosystem	To maintain biodiversity through ecosystem protection and restoration
Climate change monitoring/ prediction	To provide scientific adaptation data and reduce uncertainty
Adaptation business/	To develop new business opportunities

energy	
Public communication, education/ international cooperation	To ensure national and international public communication

The health sector is comprised of 29 projects each with the vision of protecting people from heat waves and air pollution which will be exacerbated by climate change; the disaster/accident sector has 46 projects for the purpose of reducing damages through enforcing social infrastructures and precautionary actions; the agriculture sector has 40 projects to achieve the vision of transforming the sector into environmentally friendly agricultural systems, while the forestry sector has 19 projects to achieve the vision of improving forestry productivity and reducing damage to forests; the coast/fishery sector is pursuing the vision of adapting to sea level rise by predicting changes to fish species and securing the fishery resources with 26 projects. As climate change affects the rainfall patterns and can intensify flood and drought events, the Korean government created 33 projects for securing the water management system. The ecosystem sector has 29 projects for protecting and preserving the biodiversity of ecosystems. Building a scientific database and evidence is believed to be critical to the adaptations. In order to achieve the goals, the South Korean government has selected 27 projects for monitoring and predicting climate change, 11 projects involving the business and energy sectors with climate change, and 9 projects for advancing climate technology, producing the standard Korean scenarios and building international networks (Ministry of Environment 2010). Based on the analysis of the NCCAM, the South Korean government is focusing on the advancement of technology and science by developing scenarios and making vulnerability maps and so on.

5.3. Institutional arrangements for climate change adaptation

I have investigated what has been missing in the process of policy agenda-setting and decision-making, and who plays the dominant role in those processes. I have provided evidence to support the following assertion: agenda-setting and decision-making have been initiated by the central government under the pressure of international agreements, and even who participated in

the process was decided by the central government. Power is mainly in the hands of central government as it controls the process of making policy decisions about national climate change adaptation. The questions which have been addressed are :what practical roles have been played by other institutions participating in the process and providing technical knowledge? To what extent have the researchers or participants in the institutions expressed their own opinions? These are the questions which are the main focus of the discussion in this sections.

There were two institutions which were inaugurated in order to oversee the newly established programme for implementing climate change adaptation in South Korea; these are the Korea Adaptation Centre for Climate Change (KACCC) and the Presidential Committee on Green Growth (PCGG). The PCGG is designed not only for adaptation policies but also other policies related to green growth and low carbon agenda. According to the recommendations of the National Climate Change Master Plan which is the prototype of the NCCAM, the South Korean government established the KACCC in 2009. It is supported financially and overseen by the Ministry of Environment and provides technical information and professional advice to the Ministry. In the process of making the NCCAM, the KACCC plays a key role; writing the documents and collecting opinions from ministries and advisory boards (Jeon 2010b). The special committee, the PCGG located in the President's office, is supposed to give only technical advice to the President, but it sometimes act beyond this limited remit (Kim 2010). An example is the initiation of the FALG.

It was decided that the Division of Climate Change Cooperation in the Ministry of Environment should take general charge of climate change adaptation in South Korea (Jeon 2010a; Ministry of Environment 2010). The Division has the responsibility of directing and monitoring the whole process related to climate change adaptation from national to local level. Other ministries are expected to submit progress reports to this Division (Ministry of Environment 2010). The Division cooperates with the PGCC in the matters of climate change adaptation policies and reports to the President of South Korea about the process of creating the policies. When it comes to decision-making regarding climate change adaptation, it is the President of South Korea that heads up the process.

Global policies, extreme weather events and mass media and public opinion about climate change adaptation also influence decision-making about policies (Swart et al. 2009). However, there is no official document about the participation of the private sector. Unlike the UK's efforts to include the private sectors (Cimato and Mullan 2010), institutional arrangements for climate change adaptation do not formally include private sector. Figure 5 illustrates the institutional decision flowchart of South Korea.

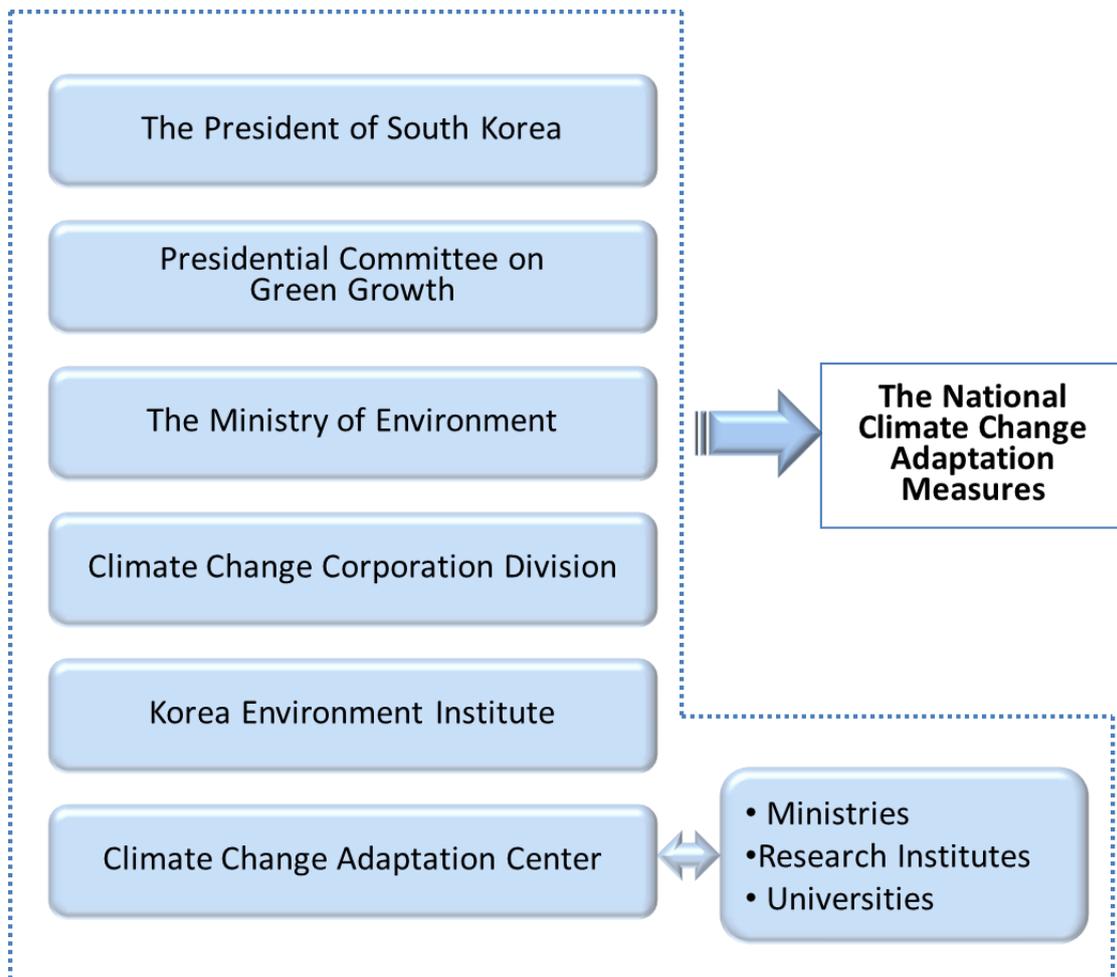


Figure 5: Flow chart of decision making about the NCCAM (Source: Made by the author of this thesis)

Concerns have been voiced regarding the decision making process with respect to the South Korean adaptation policies, on the grounds that the government has set boundaries and may have removed the opportunity for diverse and useful policy options which might have been raised by other actors (Jeong and Byun 2011). In addition, the advisory board should reflect on the guideline provided by the government officers, does this limit the flexibility of policy making. The special relationship with the government constrains active participation in the process of decision making.

Accepting that the NCCAM is a national level master plan for climate change adaptation, it does not seem appropriate to exclude local level actors where most adaptation measures will, in practice, take place. A state-led and top-down approach with strong leadership, it is argued, is a way to make the efficient. However such an approach to climate change has limitations for it reduces the diversity of policy options and this may increase vulnerability and reduce resilience to unexpected impacts.

According to the FALG, the next step is to make the Action Plans for the NCCAM and local adaptation policies. In the same Act, Article 38 states that as part of this process, the authorities should invite the public to participate in the process of decision making. However, there are some who are sceptical about the practicality of the Act (Park 2010a; Huh et al. 2008; Hwang 2009); one of the reason given is that civil organisations lack of knowledge about climate change adaptation (Ministry of Environment 2007).

5.4. Summary

This chapter has aimed at investigating what does and what does not happen vis-à-vis government and governance mechanisms in the process of making climate change adaptation policies, from the stage of agenda-setting to decision-making policy options, as well as what happens at the stage of implementation; it has asked questions about what has, and what has not done once the research state has been completed. The main thrust of this chapter has not been a technical examination of policy but rather an analysis of how the expression of political culture and governance influences the process. This has been done by reviewing the secondary materials analytically.

By seeking what has been missing in the process of making national climate change adaptation policies in the context of the governance, I have found out that, from the point of policy agenda-setting to the stage of decision-making, the process is more influenced by 'subject' political culture rather than participant culture. The political culture of the South Korean bureaucracy and

authoritarianism are clearly observed in the making of climate change policies and relevant policies. Substantial power sharing between government and private sectors is not a recognizable feature of the political activities. The key players in the agenda setting and the decision makers about policy options are high level politicians. Experts for the advisory board were recruited in order to give technical and profession advice for formulating the NCCAM, however, their exact roles are not clearly indicated in the documents. Their limited role of providing professional knowledge as directed by government is interpreted in the light of a political culture based on Confucianism: the will of government is the will of heaven. In order to examine the degree of involvement of the experts in the practical decision making process, more specific and evidence-based in-depth research, based on face to face interviews, is necessary. Interviews will show how South Korean political culture has been expressed in the decision-making; and what are the constraints which limit participatory governance arrangements attempted by the government, Therefore, the next two chapters, Chapter 6 and Chapter 7 discuss the empirical findings derived from interviewing advisory board members who participated in making national climate change adaptation policies in South Korea. They set out examine the reasons why some interviewees are complacent about the current procedures for creating climate change adaptation policies, while other express dissatisfaction with the policy making process. They will also identify barriers to adopting governance approach in South Korea. The division between Chapter 6 and Chapter 7 is made on the basis of the negative and the positive responses recorded in interviews.

Chapter 6. Complacency about climate change policies in South Korea

“With respect to the vertical dimension, adaptation may be guided or constrained through top-down mandates or national policy, but its implementation will be inevitably local in character (Corfee-Morlot et al. 2011, p.176).”

6.1. Introduction

Chapter 5 examined the expression of political culture and limitations in the process of formulating a national adaptation policy in the context of a governance approach. Due to limitations posed by secondary documentary sources, the argument needs to be supplemented by the participants' experience. For that reason, this chapter and the next investigate the attitudes expressed in the process of policy making: this is based on semi-structured interviews. The interview data collected in South Korea from October 2010 to March 2011, and October 2011 extended to November 2011, was obtained by interviewing advisory board members who participated in making the NCCAM and other climate researchers.

The general characteristic of South Korean political culture is authoritarianism created by a mixture of a subject and participant political culture, comparatively strong conservatism rooted in Confucianism, and bureaucratic attitudes resulting from political elitism. This chapter aims to investigate how such a political culture is expressed through the experts and policy makers who have participated in making national climate change adaptation policies.

The analysis of the results is categorised according to the attitudes of interviewees with regard to political objects; are they complacent about the process of policy making or do they challenged by the political structures? The first theme is discussed in Chapter 6 focusing on why the interviewees have optimistic attitudes towards the progress of climate change adaptation. By

contrast, the following Chapter 7 discusses the sceptical and cynical responses of some of the interviewees.

Chapter 6 is arranged under two major headings: the first part examines the drivers and preconditions pointed out as essential conditions for successful delivery of adaptation policies, and analyses what determines the policy goals. The order of the listed preconditions is based on the frequency of statements made by interviewees, the most frequent comes first. The later part investigates the reasons why some of the interviewees feel satisfied with the present governing structure. The reasons for the complacency with regard to current climate change adaptation are examined, and in particular whether this satisfaction is rooted in policy inertia which arises from being accustomed to top-down decision making, or to practical improvements in a participatory governance approach. The question about whether the culture of policy decision-making has positively or negatively influenced multiple actors' participation in a governance approach to climate change adaptation will be examined in Chapter 6.

6.2. What makes a successful climate change adaptation?

Climate change adaptation in this research adopts the definition of the IPCC(2007), which conceptualises it as the actions that people take in response to, or in anticipation of, projected or actual changes in climate, to reduce adverse impact or to take advantage of the opportunities posed by climate change (Adger et al. 2007). The South Korean climate change society also adopts the definition produced by the IPCC.

The first part of this investigation examines the way in which the advisory board members and policy makers conceptualise what it takes for successful adaptation to influence the direction of climate change adaptation policies. Sound decisions regarding policy directions would be conducive to a successful outcome. When interviewees are asked about the goals of adaptation policies in South Korea, their responses are divided into two types: a utilitarian approach and an egalitarian approach (Brooks et al. 2011). The first, the utilitarian approach is commonly observed in the responses of policy makers who worked

in government offices. They state that the goal of climate change adaptation in South Korea should focus on obtaining maximum benefits for the greatest number acting within the constraints of a limited budget. As an interviewee states, if the goal of adaptation measures is to provide more people with a public service, the policy options should be decided very carefully. According to the decisions made, the target group of the adaptation measures will change.

“if possible, we should invest in nationwide. But we have very limited resource, so we usually take account of demographic distribution and priority... [...]...where we should invest? We should invest in the place of more people affected.” (No. 17 a senior level of government official)

By contrast, an egalitarian approach aims to assist some specific vulnerable people who are in danger of suffering the impact of climate change, which is also called a ‘vulnerability approach’ (Tompkins et al. 2010; Eakin and Patt 2011). Interviewees who work in health sectors state that adaptation should focus on reducing the impacts on socially marginalised groups who usually live in vulnerable environments and are seriously impacted by extreme weather events. If the call for social justice and welfare is to be addressed, vulnerable groups should raise their voices about their needs (Ahmed et al. 2009). Adaptation strategy in the health sector includes some measures for caring for vulnerable groups (Choi et al. 2010). However, the key concern of the majority of the interviewees was that government should invest limited resource in the projects which give benefits to as many people as possible by reducing the risks posed by climate change rather than focusing on some specific vulnerable group. Their statement is in some ways consistent with the vision of the NCCAM: ‘to establish a climate-safe society through green growth’. But no one has attempted to explain why climate change adaptation should be achieved by green growth. However, there remain some doubts about how many of their opinions were taken into account in the process of goal-setting for adaptation policies.

I asked the interviewees what should be done in South Korea in order to achieve successful delivery of policies listed in the National Climate Change Adaptation Measures. Based on the answers to the question, the following

section discusses what the interviewees have said regarding the way to a successful delivery of adaptation policies.

6.2.1. Raising public awareness

As scholars argue, understanding public perceptions of climate change risks is an essential element of successful adaptation (Lata and Nunn 2012; Pittock and Jones 2000; Eakin and Patt 2011; Carter 2011; Hartz-Karp and Meister 2011; Wheeler 2008; Carmin et al. 2012; Berkhout 2005; Picketts et al. 2012; Eakin et al. 2011; Eriksen 2005; Bele et al. 2011). Some interviewees recognise the importance of public engagement, and they argue that public behaviour can change, if the public perceives the risks of climate change, this is very important for effective adaptation delivery. This section discusses how public opinion has in reality been addressed in making the NCCAM.

One interviewee suggests an ideal way to make a policy; the government understands the social consensus on the importance of adaptations, so that it takes actions by making practical policies. But the suggestion ends by proposing the routine way of making policies in South Korea (the sentences are highlighted by italic fonts).

“To perceive the discourse of the general public is the role of government: the prevalent discourse of local people based on common sense. (Government) should know what projects should be carried out and what the public want. And the level of knowledge the government has is persuasive enough to make them realise the public demands. [...]. Both (the government and the general people) should work together. If the public are not interested in, policy makers don't feel the needs to spend money on the issue. When only the public are interested but policy makers aren't, then it is impossible to make a policy. If both (the public perception and policy maker's attention) go together, then it is easy to allocate funds and to make a policy. I think it is best to raise public awareness and to let people know (about climate change adaptation), and then to request a policy to be formulated. [...]. They want to achieve tangible results during their terms of office. [...]. I think that the National Climate Change Adaptation Measures, as well as any other national strategy can be established only by a change of perception on the part of the policy makers. [...]. If policy makers feel that it is really necessary, then they allocate budgets and resources to it. I think that then it could take place quickly. *The first thing is to make a policy maker perceive the importance and the essence of the issue; to do this it is necessary to demonstrate the scientific background of the arguments in favour of the projects.*” (Interviewee No.28, a researcher working at KACCC)

As the interviewee states, public awareness is a very important element for the formulation of a policy and when the public understands the essence of adaptation actions and forms a social consensus regarding the need to adapt, policy makers may move in accordance with public opinions. But in reality that is not true all the time. Two more interviewees express much the same opinions regarding public awareness and consensus. However when they are asked about the need for participation from the private sector, they rarely acknowledge the role of private actors in making the NCCAM (The detail will be discussed in Chapter 7).

“Public consensus should be transferred to the members of parliament as the main form of public opinion.” (Interviewee No.2, a senior level researcher working at a government institute)

“Forming a public consensus (about climate change) leads to national prioritizing on climate change adaptation [...]. If we are talking about only adaptation (to climate change), I think, national economic power and public awareness should be significantly formulated.” (Interviewee No.29, a university professor)

Another interviewee argues that the advisory members know the importance of the involvement of private actors and social learning for effective delivery of adaptation policies, and expresses a concern that the importance of this is not realized by policy makers:

“The key point of adaptation is how to raise public awareness. For example: reducing energy consumption, operating air-conditioners less in spite of hot temperatures and saving water. We need to raise public awareness and change public behaviours towards climate change adaptation through repeated public communications and public education. Public communication and social education are very important, but these are not sufficiently understood in our country (South Korea)”. (Interviewee No.6, a university professor)

An interviewee (Interviewee No.11) argues that responsibility for adapting to climate change should be shared with the general public because adaptation is not only the responsibility of the government, but also of all of us. This interviewee blames the passive and non-participant public attitudes towards adaptations:

“People have taken it for granted that government should be responsible (for the damage caused by extreme weather events), but the risk and damage should be prevented by individuals. [...]. If people are informed about the danger (posed by climate change) beforehand, then they can choose whether to buy insurance or not and prepare for the risks.” (Interviewee No.11, a researcher working at a government-funded institute)

Although the interviewee (No.11) argues that the general public should prepare for the risks posed by extreme weather events, this interviewee misses the fact that taking out climate change insurance in South Korea is not commonly accepted as necessary. In addition, taking into account that private actors are not invited to engage in the policy making processes, it does not seem reasonable to place the responsibility on the general public. Under the circumstance of limited information and exclusion from the policy making process, it is not even fair to expect people to share the responsibility for the outcomes of the policies. In the light of this it seems not unreadable to accept the rationality of the following statement:

“Public conception regarding climate change is the most important thing for climate change adaptation. However, adaptation strategy should be made by experts and the adaptations should be delivered to general people.” (Interviewee No.27, a university professor)

This interviewee distinguishes between the role of experts and the general public. This individual sees a dichotomy; experts (in this case policy makers or advisory members) make policies and the general public receives the delivery of climate change adaptation. This individual overlooks the role of the private sector at the stage of policy making as a positive factor for increasing the effectiveness of policy implementation (Pelling 2011; Corfee-Morlot et al. 2011; Falaleeva et al. 2011; Folke et al. 2005; Chhotray and Stoker 2009a; Doherty and Schroeder 2011; Hopper 2009).

Although some of the interviewees mention the importance of public awareness and consensus about the essence of climate change adaptation, it does not show that they support measures to include the private sector in the process of decision making about policy options. Instead, the interview with interviewee No.27 reflects the real situation prevailing in policy making in South Korea.

6.2.2. Building adaptive capacity

The next issue for effective adaptation is, interviewees argue, capacity-building in institutions and building networks between groups of experts. They point out

that building partnerships and networks among groups of climate experts will save resources by preventing overlapping of policies between departments and in the end an increase in the effectiveness of policy deliveries. Their argument can be seen as their suggestion for employing a governance approach. But they seem to restrict this to some elite groups of experts. There is another statement related to this subject. One interviewee (No.26) states that networking of relevant experts is an important way of building capacity in the institutions, and a network would be established to connect climate experts working at private or governmental institutes. The interviewee optimistically remarks that the network can collect useful data and diverse opinions about policy options.

“ [...] I want to go back to the previous story about networking consulting groups, which is also one of the mechanisms for building capacity. When the members meet and share information about current problems, they will know what should be done and what is not to be done. [...] in order to make good progress, and to collect data and to do research well...” (Interviewee No.26, a senior level researcher at KACCC)

In the interviewee (No.26)'s opinion, collecting information and aggregating useful knowledge are essential for making rational adaptation policies, this is also argued by other researchers (Smithers and Smit 1997; Chikozho 2010; Tompkins et al. 2010; Dumollard and Leseur 2011; Boykoff 2009; Juhola and Westerhoff 2011; Fussel 2007; Adger 2010; Biesbroek et al. 2010). It is true that improving the adaptive capacity of institutions will bring about the collecting of more reliable data, and making accurate scientific scenarios, and will result in more diverse adaptation policy options which will be helpful for preventing maladaptation or unsuccessful adaptation (Barnett and O'Neill 2010). Although the interviewees address the important roles of experts and academic scholars, they usually mean that building networks is restricted to groups of experts and there is no mention of actors from the private sector.

Asked about the engagement of private actors, one of the interviewees (No.26) remarks negatively about the participants of the private sectors, arguing that there is no need to engage the general public because this is a process of creating 'national' (highlighted by the interviewee) climate change adaptation policies. The interviewee argues that initiatives in climate change adaptation should be the responsibility of central government. And the person adds that although there might be some flaws in a top-down approach, it is the generally

accepted process for making national policies. The national policy making process, the person believes, should be restricted to certain groups of political elites only:

“Still we are just at the initial stage, aren’t we? Inevitably there will be lots of trial and error. Special conditions and infrastructure should be prepared for making adaptation strategies at central government level, first. [...]. We (South Korea) need to know where (climate change) would result in impact or not. I know we have a big hole in this process.”(Interviewee No.26, a senior level researcher at KACCC)

When most interviewees speak of ‘building capacity’, they refer to institutional capacity at the central level through creating networks of experts. Generally, interviewees argue that it would be an efficient use of limited resources. Institutional approaches to climate change adaptation can be a good governance strategy when the institutions mirror public opinion and can take account of the diverse nature of the information which must be processed when making policy decisions. But their argument may reflect personal benefits rather than the practical effectiveness of adaptation policies, because what must be taken into account is the fact that most interviewees are working at government institutions or carrying out government-funded research. Building capacity through providing more funds can be interpreted as the researchers at the institutes hoping to receive more funds for their research or projects.

6.2.3. Prioritizing climate change adaptation

Prioritizing on climate change adaptation is to put forward as a determinant for a successful delivery of policies (Dumollard and Leseur 2011; Ford and Pearce 2010; Bulkeley and Kern 2006; EC 2009; Bele et al. 2011). It seems rational that climate change has gained the attention of policy makers and that it should be attributed to the government paradigm of low carbon and green growth. Interviewees argue that along with the green growth agenda, climate change adaptation also became a part of the country’s political discourse and assumed the importance of a policy agenda.

One interviewee (No.17) comments that the government has many policy agendas but limited resources; accordingly decision makers should consider what is urgent and prioritise them.

“Green growth is the same (as climate change). Green growth didn’t appear suddenly in this government term. It was called a different name by previous governments like ‘being sustainable and environmentally friendly’. But these agenda were not policy priorities. [...] It is always ‘agenda issue’ in the government policies. Don’t you think it makes sense? Climate change is like this. Ministries try to make a new department named Green Future Government Department. [...]. Think about what the key policy agenda of the current government is. For example, if the agenda is green growth, and focusing on green growth, then the government allocates money to it. [...]. In such a way, the budget of the government goes to the area most people are interested in.” (Interviewee No.17, a senior level government official)

The interviewee adds to the comments regarding the way to allocate government money by addressing the importance of policy priority. When central government sets up a national political agenda in South Korea, every governmental organization should embrace the agenda in almost every policy, and policy makers should consider the political agenda seriously. A political agenda item is generally set up by high level politicians through a top-down approach. Interviewees are happy about the situation that the current government has become interested in climate change as a result of the green growth and low carbon paradigm; therefore climate change is treated as a significant government policy priority.

So far in this section, I have analysed what could make climate change adaptation successful by using the responses of the interviewees. Although the interviewees recognise the importance of a public consensus regarding the policies, no one mentions about the need to involve diverse actors including members of the private sector. Interviewees point out that building network between organizations and making partnerships with groups of experts save time and money by sharing their information and data. The factors which interviewees see as encouraging to the building of adaptive capacity are limited to the capacity of building governmental organisations rather than building capacity of a participatory governance approach which includes a variety of actors from multi-faceted sectors. It seems that interviewees focus on building their own organizations.

6.3. What makes some policy makers complacent about the process?

Some of the interviewees think that current climate change adaptation is in good shape. Then the bases for the complacency about the results of policy making are examined and critiqued from the perspective of political culture and a governance approach under three sub-headings: the power of a new national regime as a driving force for climate change adaptation; increased support from government; and extreme weather events as potential focusing events.

6.3.1. The powerful new national regime

The interviewees who are members of the advisory board for making the NCCAM seem to be satisfied with the progress in climate change policies in South Korea. They point out that the first driver for moving forward to climate change adaptation is the national key policy agenda: low carbon and green growth, which the Korean President announced as a new national paradigm at the 60th national independence anniversary (Korea 2008). Although the term green growth was not first used by the President, new government of South Korea in 2008 decided to take 'green growth and low carbon' as a new national regime and announced it at the 60th anniversary of the founding of South Korea. Thus it became a key policy agenda and policy makers have tended to quote the word in most policy options. In this section I examine how their political attitudes are expressed by the interviewees.

“(I) worked on climate change about three years ago. At the end of the Rho government before this government began, green growth appeared. At first low carbon was focused on, the importance of (climate change) adaptation was perceived, and now policies (regarding climate change) are made....” (Interviewee No.7, a senior level researcher working at government-funded institute)

Although there are some negative opinions expressed regarding the low carbon and green growth agenda (Kim 2009), the positive influence of the green growth trend is reflected in an increases in the numbers of policies related to climate change as well as renewable energy and low carbon industry in South Korea. Most interviewees agree that the idea of green growth and low carbon is helping climate change policy to work well at a central government level and more funds are coming into their institutes.

“The community in our country has a greater understanding of climate change than other countries. And the government takes green growth as a part of its

political agenda.” (Interviewee No.8, a senior level researcher working at a government institute)

According to these opinions of these interviewees, as the government chose green growth as a platform for national policies, the researchers at institutions received more funds to do research regarding climate change than they had before. The governmental ministries were required to set up green growth departments in the ministries and tended to add the phrase of ‘green growth and low carbon’ to their policies. In a normal situation it is very difficult to create a new department in the administration system of South Korea, but the term ‘green growth’ unlocks many doors in the Lee government. The interviewee (No.32) gives an example of how the green growth agenda is helpful for promoting projects related to climate change in the institution:

“[...]. So, low carbon and green growth work very well. Carbon (that is, greenhouse gas emissions) was not treated as a cost in the past. But with the influence of green growth, carbon emission regulation is enforced, and carbon itself becomes a cost. Then new low carbon technology will be commercialised (thanks to the current green growth trend).” (Interviewee No.32, a senior level researcher at government-funded institute)

“When the law (the Framework Act on Low Carbon, Green Growth, which was announced by the Presidential committee) takes effect, we can’t help taking the actions enforced by the Act. Although the law is not detailed, it can provide something of a basis.” (Interviewee No.34, a researcher working at government institute)

The interviewee is in favour of the green growth agenda and support from the binding laws (the FALG). The reason seems to be more or less for personal or institutional benefits: thanks to the policy discourse on green growth, the interviewee receives funds more easily than before. There are more respondents (No.7, No.8, No.14, No.17, No.23, No.34, No.37, No.27, No.30, No.31, and No.28) who mention this element of increased funding opportunities for their organizations thanks to the green growth agenda:

“Our institution, if possible, is trying to carry out green projects under the concept of green territory; focusing on a green theme, green transport, green buildings and green construction and many other green policies. [...]. We should think about what is the policy agenda of the present government. That is green growth. Then, money will go to green projects we will give money to the policies of green growth. Funds will go there.” (Interviewee, No.17, a senior level government official).

The interviewees (No.27 and No.32) indicate a belief in green growth which is very optimistic:

“The current government’s, new slogan is green growth. The title of green growth is not only for the current government but will not be abandoned by the next government. Green growth has become a great issue. Then, this, climate change is not a case which can be closed although the government changes. Because phenomena (as a result of climate change) are happening, although the government changes, the agenda of green growth and climate change may be sustained” (Interviewee, No.27, a professor of a university)

“As green growth is enforced by the President (of South Korea), we (the South Koreans) are dealing with it well. We should move fast and go ahead of the world (the person was talking about green technology development). What I just worry is that, we say too much “green growth, green growth”, and in spite of being good concept, the next government might hesitate to keep it. Maybe the term can be transformed into another word.” (No.32, a senior level researcher at a government-funded institute)

Overall, the interviewees are in favour of the government’s key agenda, green growth and low carbon, because of the advantages it brings to their own projects or their institutions, rather than from a desire to see the practical implementation of climate change adaptation. They utilise the policy trend to enhance the performance of their institutional projects. The interviewees’ statements do not necessarily indicate that they are satisfied with the government’s approach to policy making, but they are in favour of a green growth agenda because it suits their own interests – which means more funding opportunities.

6.3.2. Support from government

The interviewees point to the new national regime as the reason for their satisfaction with the present state of climate change policies in South Korea. However the second reason reflects the typical political culture of authoritarianism and bureaucracy. This section starts with quotes from interviewees:

“When it comes to the MB⁵ government, green growth became a key governmental policy the whole for the whole.” (No.17, a senior level government official)

⁵The Lee government (2008~2013) of South Korea is called the MB government, naming it after the initials of the President.

“As the President Lee took the office, climate change and green growth became two big policy items in our country. As the president is interested, they move very fast...and the local governments know the situation (the president is interested in climate change and green growth).” (Interviewee No.4, a senior level research working at government-funded institute)

“We(the team) are going to report the progress to the President at the end of this month. When it is done, I don't know what he will say (about that). [...]. Of course, the President's interest is very helpful (for us to work on climate change adaptation). [...]. The problem is how he will concern himself with it. [...]. Such policies (like climate change adaptation) cannot be done by our own will, but need the will of leaders. [...]. So I am concerned about what the President might say.” (Interviewee No.26, a senior level researcher at KACCC)

“Of course the concern of the President is very helpful (for working on climate change).” (Interviewee No.31, a senior level government official)

“The presidential committee on Green Growth began to make a fire (meaning; makes it work well). [...]. Our President stayed ahead of (the issues).” (Interviewee No.32, a senior level researcher working at government-funded institute)

As the above quotations show, the interviewees seem to believe that the powerful leadership and top-down approach is working well in governing climate change. The national political agenda, as stated in the previous section, is generated by central government and the new presidential cabinet. Most interviewees claim that the hierarchical approach is, in practice, helping the progress of making policies related to climate change adaptation. With the encouragement of influential high level politicians, climate change policies are enabled to progress faster than they were under the previous government. Interviewees state that a top-down approach works in promoting adaptation policies in South Korea. Interviewees hold that in response to the interests of President Lee, policy makers in government offices should pay more attention to and work on green growth policies and show the evidence of progress. These remarks show their substantial support for the actions resulting from the President's leadership. Interviewees seem to believe that the rapid progress made by the current government with respect to climate change policies, is due to the President's concerns:

“The present government has more interest in (climate change). The influence of the President acts very positively. It is a real positive driver. As the President has a great interest in it, there is a definite positive influence. [...]. This has been made possible by the national policy agenda. ” (Interviewee No.26, a senior level researcher at KACCC)

Interviewees argue that promoting climate change policies would need governmental intervention and strong leadership. They add that orders from the central government and a top-down approach will help to speed up the progress of adaptation policies at local levels. One interviewee tells an anecdote of local government officials asking for help from central government to promote local level climate change policies:

“They (climate change policy makers in local governments) commonly request central government to tell the chief of local authorities to take actions in (climate change adaptation).”(Interviewee No.38, a government official)

The story indicates that local governments are not reluctant to follow instructions from central government rather do local government officers need back-up from central government and/or relevant guidance. According to the interviewees who work in central government, local governments are willing to follow central government’s command and control. The opinions of policy makers in central government can influence local governments, nudging them to perceive green growth, as well as climate change, as important political agenda items for local governments (Interviewee No.4, is a senior researcher working at government-funded institute and No.40, is a local actor). There are a few examples of local governments that have made climate change policies supported by central government: For example, JEJUSI-JEJUDO, SEOUL⁶, INCEHON, and GANGWONDO have instigated pilot programmes with regard to climate change supported by the Ministry of Environment. These programmes are expected to be used as best practice or good examples for other local level strategies. And according to the statement of an interviewee (No.40, a local actor): there is an example of a local climate change policy initiated at the local level without central government input. The interviewee works at an organization funded by a local municipality. It is running programmes related to the reduction of greenhouse gas emission: educating citizens about how to reduce emissions at home and providing a class for businessmen to raise awareness about climate change risks.

“The former mayor was very interested in climate change and mitigating climate change through reducing greenhouse gases. [...]. So the municipal authority made an environmental foundation, which was suggested by him (the former

⁶ Seoul city web page for Climate Change adaptation
(<http://cleanair.seoul.go.kr/inform.htm?method=climateAdaptation01>).

major), and opened a public forum about the policy agenda and collected public opinions.” (Interviewee No.40, a local actor)

Even in this instance where the initiative has been taken at the local level, the interviewee believes that it is the mayor’s leaderships in the municipal authority that has helped to strengthen the drive to create local climate change policies namely mitigating policies. Although the programmes are not funded by central government, they are still funded by a local government and are controlled by the local authority.

As seen in the responses of the interviewees, a top-down approach and the high-level politicians have a powerful influence on the practice of climate change policies in South Korea. The interviewees see this as strong leadership exercised in a good way. According to the interviewees, the people in charge of the delivery local policies want to retain command and control by central government. It seems that local actors take this situation as a fudged agenda which will change with the changes of central government, as this they have experienced this before. Sometimes they may even fully understand and support a new policy agenda but governments come and go as do their policies (A similar case study has been carried out in the USA (Hess 1998)). Therefore they tend to take a passive attitude and evade responsibility. In fact, such attitudes are also observed in the remarks of mainstreaming climate change adaptation into the existing policies. Mainstreaming is practically recommended by many scholars for practical effective delivery of adaptation policies (Juhola and Westerhoff 2011; Bele et al. 2011; McEvoy et al. 2008; Biesbroek et al. 2010; Cimato and Mullan 2010; Lyytimaki; Carmin et al. 2009; Stringer et al. 2010). However, sometimes this ‘mainstreaming’ is misused, it becomes an excuse for not taking responsibility instead they simply change the terminology of a policy to make it fit into the frame of national policy agenda.

“For the most part, by linking works relevant to climate change to climate change adaptation; then, if there is a deficiency, we should make up for it. Then it is not a big burden to the person (who is responsible for delivery of adaptation policies).” (Interviewee No.4, a senior researcher at government-funded institute)

As is the case with powerful leadership, another key driver of climate change policies in South Korea is pointed to as command-control by central government. When interviewees say central government, from the perspective of climate change adaptation, they sometimes mean the Presidential Committee on Green Growth. As discussed at Chapter 5 of this thesis, the committee is just an advisory organization, but most interviewees see the Committee as having the power and authority to command, because it is located at the President office. The interviewees do not voice any resistance to the involvement of the Presidential Committee without any resistance.

By contrast, when interviewees are asked about the participation of private actors and their roles in making policy, they comment that public engagement is not common practice in the formulation of national policies in South Korea. The interviewees remark that the government should be in sole charge of national policy making. The interviewees (No.29, 26 & 28) take for granted the exclusion of private actors from policy decision making, arguing as follows:

“Adaptation Measures (National Climate Change Adaptation Measures) is a national policy. So there were limits on the public engagement. When the measures are to take place, public opinion might be needed. [...]” (Interviewee No.29, a professor of a university)

“It (National Climate Change Adaptation Measures) was a government-led initiative. There were no civil actors but ... small groups of experts advising the government, they could be part of civil actors.” (Interviewee No.26, a senior level researcher at KACCC& No.28, a researcher at KACCC)

These interviewees state that local level adaptation policies may include stakeholders in the process of decision making, as if they also care about participatory governance. However, according to an interviewee (No.33, a researcher at a government-funded institute) who helps local governments to frame local climate change adaptation strategy, it is not possible for private actors to be invited to the decision-making process even at a local level.

Interviewees express positive views towards the style of policy decision making: the government-led and top-down approach is generally seen as efficient in terms of speeding up climate change adaptation in South Korea. One of the interviewee points to the weak capacity of local actors as the reason for

command by central government as well as the complexity and uncertainty of the degree and location of climate change impacts.

6.3.3. Extreme weather events as focusing events

Interviewees remark that extreme weather events can raise government's awareness of climate change and the need to adaptation to it. They argue that ironically, frequent severe weather events accompanying by a large amount of damage are assumed to help policy makers and experts to pay attention to risks posed by climate change. Interviewees (No.16 and No.31) claim that there is a positive relationship between climate change risks and raising awareness:

“That’s natural. It (climate change) is really happening.” [...] “Extreme weather events used to be an extraordinary incident, but they have become usual events. There are many reasons we need to adapt to the change as soon as possible...” (Interviewee No.16, a senior level researcher working at government-funded institute)

“The department named green future strategy was set-up, the agenda of green growth is enforced and extreme weather events become frequent. As was the case last year, after the cabbage shock (cabbage farming was impacted by heavy rain and a strong typhoon, and the cabbage retail price peaked), people (policy makers) became interested in adaptation (to climate change).”(Interviewee No.31, a senior level government official)

“People will change (their behaviours) when they experience something caused by climate change in their daily lives. That’s the way people come to feel the urgency; the media will report it and then the public will respond to it.”(Interviewee No.20, a researcher working at a government-funded institute)

“Two big landslides and major power outages seemed to work out positively in our country (South Korea). Owing to these big events, climate change adaptation became a national issue. It is said that adaptation is essential.” (Interviewee No.28, a researcher at KACCC)

These express very optimistic views regarding the way in which policy making proceeds: for instance, the extreme weather events and damage caused by these events drew the attention of the mass media, which lead to a public consensus on the dangers of climate change. They refer to an example of substantial action when there was a much damage caused by an unexpected flash flood. During a Korean holiday in September 2010, South Korea had unexpected heavy rain. About 10,000 people were victims of flash floods at that time. These were sparked by an episode of the heaviest rain in the 102 years

since Korea began collecting meteorological data (Park 2010b). The primary reason for the flash floods was extremely heavy rain which overstretched the capacity of the sewage pipelines. However, an increase in the capacity of the pipelines had been proposed by experts, but the priority of the Seoul municipal administration was not that of adapting to climate change by increasing pipeline capacity (Kang 2010). An interviewee (No.4) takes, as an example, this big flash flood event in Seoul City commenting on how it made policy makers work very quickly:

“Until the event (flash flood) happened and damage occurred, nobody said that the sewage systems should be replaced. [...]. The heavy rain came down all over the area of Seoul during a big national holiday. The rain water couldn't get out of the sewage pipelines and caused a big flash flood. That's it. Until it really does happen and big damage is incurred, no one says that it is time to change the sewage systems. So the relevant ministries changed relevant regulations and planned to expand the pipeline capacity” (Interviewee No.4, a senior level researcher working at a government-funded institute).

The interviewee explains how climate disasters could change the perceptions of people and cause policy makers to take action. That event made the relevant civil servants respond to the damage and change the rules, for example, for expanding the capacity of sewage systems, the construction of rain water treatments facilities, and placing restrictions on urbanization in flood prone areas (Kang 2010; Hong 2010). However, the interviewee points out that the through extreme weather events might catch the attention of the public and policy makers temporarily and in the short-term, they do not guarantee that this would result in real practical change in the system of policy making. The extreme weather events do not always work as focusing events that will result in the precautionary actions required to cope with climate change being undertaken.

“They know it was the result of extreme weather. ...but that...is... if an accident or disaster occurs, budgetary allocations are made, but gradually the priority changes again. [...]. However, there are some worries about such trends. Even though people (policy makers) perceive the risk posed by climate change, it does not lead them to formulate policies to respond to climate change.” (Interviewee No.20, a researcher working at a government-funded institute)

The impact on policy makers and people in general may be to trigger knee-jerk reactions to the extreme weather events which may raise awareness of dangerous climate change temporarily and spontaneously. However this

awareness becomes blurred as time passes and people will forget the seriousness of climate change risks. Thus extreme weather events are not necessarily as strong trigger (a focusing event) to the making to making of precautionary adaptation strategies as one might expect.

I have explored the reasons why the interviewees feel satisfied with current progress of climate change adaptation in South Korea. In summary, the interviewees argue that the national green growth agenda made by high level politicians; a top-down approach to decision making, and powerful command by government, high level politician's forceful influence; and extreme weather events, are positive drivers of climate change adaptation in South Korea. But there are some missing points which have been overlooked in their arguments.

I have examined why interviewees are complacent about the processes and the outcome of policy making related to climate change. Most interviewees are working in organizations and doing research about climate change. They are not necessarily satisfied with the progress of adaptation actions but rather with increased funding opportunities on offer when the theme of a green growth and low carbon agenda is cited. They are also complacent about efficient ways of making policies resulting from a top-down approach and strong pressure from central government.

6.4. Summary

This chapter has examined the interviewees' opinions regarding what would determine successful adaptations and the reasons for their being complacent about the present status of climate change policies in South Korea. They generally agree that, in South Korea, effective drivers of progress in adaptation policies (from the perspective of climate change) mostly depend on command and control by central government and a government-led and hierarchical approach to climate change adaptation: they view this in a positive light. Table 16 summarises the factors which are working positively towards climate change adaptation as pointed out by the interviewees.

Table 16: Factors and Drivers for Successful Climate Change Adaptation (based on response of the interviewees)

Interview topic	Summary of the responses
Public perception	
Green Growth and Low Carbon paradigm and global discourse	Key policy agendas of the present government
Influence of high level politicians	The perception of that President and the leaders of local authorities place great importance on climate policies and the seriousness of risks posed by climate change
Command and control by central government	A hierarchical approach works well in terms of speeding up the processes
Extreme weather events	Frequent natural disasters caused by extreme weather events

Interviewees point out that several conditions are needed for adaptation to climate change to be successful: heightened public perception about the reality of climate change; building institutional capacity and prioritising climate change adaptation policy. An optimistic view of the process of making policy is entertained as people perceive climate change as a danger and this influences public opinion, and then policy makers take account of these opinions and make policies. Some of the interviewees refer to this as an ideal way to make climate change adaptation policies which, they state, is not yet happening in South Korea. Building institutional capacity is the second precondition pointed out by the interviewees. They assert that effective implementation of adaptation policy could be secured if sufficient financial resources were invested in appropriate organizational structures. In addition, scientific data and the assessment of vulnerability are also stated as further requirements for making the practice of adaptation policies efficient. Within the limitations imposed by the availability of resources, decision-makers choose what they deem to be the most important issue and allocate resources accordingly. Therefore, it is said to be essential to place a high priority on adaptation actions if these adaptations are to be delivered.

Interviewees state that the progress of present adaptation resulted from: (1) The new national paradigm, that is, low carbon and green growth, this reflects timely global trends; (2) The influence of high level politicians, which could be reflected in strong leadership; (3) Command and control of central government; and (4) Extreme weather events. After a new national paradigm which is to achieve low

carbon and green growth, was announced in August 2008, the government created a legal basis for implementing this paradigm and relevant policies. The National Climate Change Adaptation Measures (NCCAM) is one of the policies which should be made in accordance with the binding laws (the FALG). Some interviewees have argued that high profile political involvement; the command and control of central government; the frequent extreme weather events accompanied by heavy damage in the urban areas, have helped to draw attention to policy makers and make them take actions by making adaptation policies. Therefore, they have argued, there is little objection to the top-down approach. In addition, they have argued that climate change adaptation in South Korea is the preserve of central government and there is no special need to invite actors from the private sector, especially non-experts, into the national policy making process. Some of interviewees are very complacent about the current status of climate change adaptation policies in terms of the speed with which progress is being made. They have no objection to the process, which they see as following the usual lines of policy making processes in South Korea. They believe that central government has established the right direction for the policies and that climate change adaptation will be successfully delivered in the right places. The true reasons why some of the interviewees are complacent or apathetic about the situation of climate change adaptation in South Korea will be discussed in Chapter 7.

Currently South Korean climate change and adaptation to it, has been promoted as one of the major items of the government's political agenda. However, interviewees are worried about any change in the structure after the 2012 election⁷ and after a change of government; this would bring changes to the political agenda and new institutional schemes, and some of policy agendas might be discarded. The interviewees, on the other hand, expect that though the next government might not embrace the green growth agenda as a key element of their political agenda, as climate change and the risks posed by it will continue or become aggravated, the next government is unlikely to abandon the climate change agenda. Interviewees seem to be optimistic about the future of climate change policies saying that the next government will keep climate

⁷ In December 2012, South Korea had a presidential election.

change as one of the top priorities of its political agenda, because the risks posed by climate change will continue, and the damage caused by extreme weather events will increase. Some of the interviewees point to the example of the sustainability agenda in the previous government: as governments change, only the title of policies change, the core content of policies is sustained.

This chapter, using the opinions of the interviewees as a basis for its arguments, explored why the interviewees are complacent about the current status of climate change policies and what they consider to be the preconditions for successful adaptation in South Korea. The interviewees take it for granted that it must be state-led, top-down and that it excludes private actors from the process of creating national adaptation policies. The model of the state establishing pre-determined policy boundaries is generally accepted by the interviewees. Such a governmental approach rather than a governance approach to climate change adaptation is accepted as an integral part of the policy culture in South Korea.

The next chapter (Chapter 7) will focus on the negative responses regarding the process of decision making about the national climate change adaptation policies and their observations regarding the political attitudes expressed in the process.

Chapter 7. Challenges for climate change governance in South Korea

“Understanding the wider implication of adaptation measures requires that many important normative and ethical issues be discussed and debated (Adger et al. 2009b, p.9)”

7.1. Introduction

Chapter 6 has discussed why some of the interviewees were complacent about aspects of the decision-making process in the context of the political culture and from the perspective of a governance approach to climate change adaptation. Following on from Chapter 6, Chapter 7 also undertakes a discussion and analysis of the responses of the interviewees. In contrast to Chapter 6, Chapter 7 focuses on the points the interviewees are dissatisfied with regarding the current process of climate change adaptation, and aims to identify the barriers and challenges that negatively influence adaptation policies in the context of the political culture. Sub-divisions within this chapter are grouped under four major categories: constraints resulting from the institutional culture; the policy making culture; resource constraints; and cognitive constraints. The first theme of institutional constraints observed in adaptation governance in South Korea is dealt with under the three headings: issues of a lack of horizontal cooperation; constraints of an intra-institutional and administrative culture caused by frequent changes of job positions in the different governments is also divided into human resource constraint and financial constraints; constraints posed by social relationships between government and agents, and socio-culture prejudice regarding private actors; constraints posed by the policy making culture, (these are discussed using three themes of a top-down approach, bureaucracy and political populism) and lastly some possible constraints raised by interviewees regarding local level of climate change adaptation. Under these themes, Chapter 7 seeks to answer of two questions: why do interviewees think of the constraints as challenges to adaptation to climate change? And how do the

constraints challenge a governance approach to the delivery of adaptation policies in South Korea?

Both Chapters 6 and 7 provide empirical information about the knowledge of political culture expressed as it impinges on progress in climate change adaptation and the challenges to a governance approach in South Korea. These two chapters identify practical and empirical information about the status of South Korean climate change governance by interviewing the members of the advisory board who participated in making national climate change adaptation policies in South Korea.

7.2. The constraints posed by institutional culture

The first constraint pointed out is by the institutional arrangement for governing climate change set up by the central government, which is called institutional constraints. The institutional constraints include the problems raised in intra and inter-governmental institutions pertaining to the process of climate change adaptation policies. The core of institutional constraint is related to the Ministry of Environment which is acting as the main organization for steering climate change adaptation in central government. The role of the Ministry has been determined by the Presidential Committee on Green Growth (the details of this committee are described in Chapter 5 of this thesis) for the purpose of overseeing and managing the whole process of formulating and implementing national climate change adaptation policies in South Korea. As argued by Hunters et al. (2012) the institutional arrangements in three countries; the Netherlands, Australia and South Africa, are not sufficiently robust to manage new challenges caused by climate change (Huntjens et al. 2012), South Korea also has issues regarding institutional arrangements for responding to climate change adaptation. The Ministry of Environment of South Korea is required to steer the overall progress of national climate change adaptation policies. However, interviewees complain that the Ministry of Environment, as the managing agency for adaptation policies, does not have sufficient capacity to handle the agenda properly. This perception creates problems in horizontal cooperation between interdepartmental organisations. The detail of weak

horizontal and interdepartmental cooperation will be discussed in the following section.

Another institutional challenge is posed by frequent changes of job assignment inside the institutions, and this can reduce the efficiency of intra-institutional performances and give rise to one of the major constraints to the delivery of adaptation policies. I will now discuss these challenges in more detail.

7.2.1. Lack of horizontal cooperation

According to Ordinance Article 38 of the Framework Act on Low carbon, Green growth (FALG), the minister of the Ministry of Environment of South Korea was required to create a climate change adaptation strategy in consultation with other ministers in central government within six month the binding law being enacted. As specified by the Article of the same law, the Ministry of Environment became the steering institution for climate change adaptations, while mitigation of impacts created by climate change is mainly controlled by the Ministry of Knowledge, and Economy. These two ministries have long history of rivalry and conflicts in the South Korean administration (Yu and Yoon 2006; Park and Jeong 2004; Joo and Hong 2001). Moreover, conflicts between the Ministry of Environment and the Ministry of Knowledge, and Economy have become intense over issues related to climate change policies which may hamper the effectiveness of delivery of climate change adaptation policies. Sometimes they are carrying out duplicating and overlapping policies; for example similar policies related to carbon emission reductions and emission trading systems (Kim 2012). The Ministry of Knowledge and Economy argues that policies regulating carbon emission reductions, especially from the industrial sector, should be under its control for the reason that most of the regulation of the general industrial sector is already under its management; for example, regulations pertaining to the industrial and energy sector in South Korea. However, the Ministry of Environment refutes this argument by claiming that carbon emission has to be treated as one of pollution, consequently the task of emission reduction belongs to the Ministry of Environment. Regulating carbon emissions is still an on-going issue generating conflict between the two

Ministries regarding in South Korea (Kim 2009; Kim 2012; Yoon 2009a; Yoon 2009b). However, the Ministry of Environment wants to take the leading role with regard to climate change adaptation and this is supported by the Presidential Committee on Green Growth. The role designated to the Ministry of Environment is challenged. Other governmental organizations are of the opinion that the Ministry of Environment lacks the necessary capacity; this in-fighting is hindering interdepartmental cooperation.

Owing to this phrase '*the minister of the Ministry of Environment for South Korea*', interviewees from other Ministries perceive the NCCAM as a policy that belongs to only the Ministry of Environment. Interviewees from non-MOE argue that they have formulated their own policies to cope with climate change. The following opinions show examples of how the interviewees perceive the NCCAM and the steering ministry:

"This (National Climate Change Adaptation Measures) is not a law, but just a strategy with no compulsory provisions. It is an assemblage of many existing projects. If special budgets are allocated to it, we will get involved in the delivery (of the Measures) very eagerly. Without giving money, they order us to submit reports. People don't like it. If the Ministry of Environment gives something, then...These (national adaptation measures) just increase workloads. Without this extra burden we have been working well. Why does the Ministry of Environment try to control institutes and command them to submit reports, and then evaluate our work? We don't need to hear such judgments (from the Ministry of Environment). We have to submit assessment reports regarding everything (relevant to climate change adaptation) that we have done. That's why people don't like it. Look at them (the National Climate Change Adaptation Measures). There are lots of projects. Regardless of the national adaptation measures, we have been doing well. My institute also conducts many projects regarding climate change. We have some (of our own) funding for them. That is the current situation. Working with the government is always like that." (Interviewee No.28, a senior research working at a government institute)

"Their (the attendees at the meeting) opinions are not representative of their ministries. As a matter of fact, at least people of director level should attend the meetings, and I think that the Office of the Prime Minister should have hosted the meeting. It seems that adaptation policy is not treated that seriously." (Interviewee No.28, a researcher at KACCC)

"Even for me the document is so immature... [...]. When we make our strategy, we have our own expert group." (Interviewee No.31, a senior level government official)

Thus other ministries consider that the Ministry of Environment does not have sufficient human resources as a steering institute for climate change adaptation. Although the Ministry of Environment collaborates with the Korea Adaptation

Centre for Climate Change and the National Institute for Environment Research which should provide technical and professional advice for the Ministry of Environment, many interviewees from other departments express the fact that they have uneasy relationships with the Ministry of Environment, and doubt the capacity of the Ministry of Environment commenting that national adaptation policies should not be operated by one weak ministry. One of the interviewees (Interviewee No.31) comments as follows:

“This (climate change adaptation) is not a work that can be performed by only one ministry. This is connected to all sectors of our country. [...]. It can't be practiced by only one ministry. If this were so, then the ministry would be an omnipotent ministry, but there is no such ministry.” (Interviewee No.31, a senior government official)

According to an interviewee (No.38, a government official), the Ministry of Environment has difficulty working with other departments. For example, when the Ministry of Environment requests data or reports about climate change adaptation from the other institutions, they are reluctant to respond to the requests complaining that the Ministry of Environment (MOE) imposes on them giving them unnecessary work. Many interviewees from the organization outside the Ministry of Environment think of the role of the Ministry of Environment as just interdepartmental interference. In fact the role of the Ministry is supposed to become a coordinator for the integrated and effective delivery of national adaptation policies. However, the irksomeness and resentfulness of the relationship and firmly held belief regarding the inadequacy of the Ministry of Environment makes interdepartmental cooperation difficult: the Ministry of Environment is generally seen as a powerless ministry in the South Korean governmental structure.

Two interviewees (Interviewee No.29 & 33) who work in organizations affiliated to other ministries complain about the way they have to work with the Ministry of Environment and describe how they usually respond to the Ministry's requests regarding information about adaptation policies. These interviewees claim that the Ministry of Environment is meddling in their work.

“They (Ministry of Environment) always only request data (without rewarding). But we do not need to respond to their requests. We may provide some (of the data), but we do not need to provide everything.”(Interviewee No. 29, a university professor)

“We have our own budget and projects. The only role of the Ministry of Environment is just using a ‘stapler’. That is just clipping reports with a stapler. Don’t you think so? But we do everything: to evaluate the projects and everything. We can decide what we include or exclude, the Ministry of Environment can’t. That’s it. Such a role can be done by any ministry; it doesn’t need to be the Ministry of Environment.” (Interviewee No.34, a researcher working a government institute)

The interviewees are sceptical about its role for the reason that they consider the Ministry of Environment does is not a key player but it just plunders other’s achievements without paying anything. These negative attitudes and sectionalism between institutions make horizontal and interdepartmental cooperation difficult and challenges to the successful delivery of the NCCAM. The attitudes and perception regarding the NCCAM are observed differently between organizations whether they are affiliated to the Ministry of Environment or to other ministries. Interviewees from institutes funded by the Ministry of Environment recognise the NCCAM as a national climate change adaptation policy for in which all the governmental ministries should share equal and respective responsibility. Interviewees from non-Ministry of Environment institutions claim that they perceive the NCCAM as one of the projects of the Ministry of Environment, so they accord it a low priority on. Lack of inter-ministerial cooperation will adversely influence the delivery of the national adaptation policies and inefficient administrative management by creating wasteful overlaps in the work of some policies among departments.

“The framework of the NCCAM was made by the Ministry of Environment...[...].There are a few inter-ministerial collisions...they find it a bit difficult to cooperate.”(Interviewee No.38, a government official)

“As this (the process of making adaptation policies) goes so fast and prematurely, there are some conflicts among departments even in the same ministry. [...]... Each sector acts as an individual entity; there should be inter-ministerial connections, but there is no cooperation...” (Interviewee No.33, a researcher working at a government-funded institute)

The responses reveal problems and limitations in the current management of national climate change adaptation. Recognizing the difficulty of horizontal cooperation, an interviewee reveals a plan that the Ministry of Environment will build interdepartmental networks.

“These are the same challenges we are facing which I talked about; we have difficulty collecting information about (adaptation) policies dispersed in different ministries. [...]... We are concerned that it is not anybody’s job to collect information; it is not an easy job but it is necessary.” (Interviewee No.38, a government official)

Some interviewees argue that each governmental ministry has its own strategy to cope with climate change; therefore they do not understand why and for what this National Climate Change Adaptation Measures (NCCAM) is needed. These attitudes show that the strong familism rooted in Confucianism exists in governmental departments (details of this culture have been discussed at Chapter 3 of this thesis) so that they place high priority on their own ministerial tasks. This hampers cooperative work for effective implementation of climate change adaptation policies. Another possible reason for such poor cooperation results from the decision making methods adopted for creating national climate change adaptations; they are initiated by high level politicians and not by collective decisions of participants. If there are serious conflicts among governmental organizations during the process of policy making, the outcomes of policies can become unsuccessful.

7.2.2. Constraints resulting from the intra-institutional and administrative culture

As discussed in the previous section, lack of interdepartmental cooperation and mistrust in the capacity of the coordinating department appear to become barriers to effective delivery of adaptation policies in South Korea. In addition to interdepartmental issues, this section discusses the constraints within institutions under current administrative structures. This is a further issue raised by interviewees. These are human resource constraints and financial resource limitations. The constraints posed by resource limitation are one of the commonest and most frequently observed issues in climate change adaptation, not only in South Korea. The question to be addressed is how these constraints pointed out by interviewees are influencing the delivery of adaptation policies.

7.2.2.1. Human resource constraints

In addition to a lack of horizontal cooperation caused partly by tensions between ministries and partly by mistrust in the capacity of the steering department, act as inter-institutional constraints for governing climate change adaptation, a further constraint is identified by the interviewees. They complain

about frequent changes of job positions and tasks-given in their institutions, which are attributed to an intra-institutional and long-standing administrative culture. Some interviewees argue that this administrative culture makes their work fragmented and slows down the progress of implementing policies. Interviewees add that assignment changes occur frequently at both central government and local government levels. The rearrangements of job positions occur more frequently when they are dealing with climate change policies. Therefore, some interviewees complain that they sometimes repeat the same things over again.

There is another constraint posed by allegiant political culture. Central and local governments should create a new department which specifically takes charge of *green growth* in accordance with the Framework Acts on Low carbon, Green Growth (FALG). This has not happened as a result some interviewees complain that with limited human resources, they are expected to do additional work, they find this disconcerting:

“That (the problem) is human resource, professional people...Not everyone can deal with climate change policies.” (Interviewee No.33, a researcher working at a government-funded institute)

Therefore, for the most part, existing departments who handle environmental issues take on responsibilities additional to their already overloaded tasks. One interviewee expresses how local civil servants perceive climate change adaptation:

“Street level civil servants should recognize the importance of the work and, how adaptation policies relate to other existing tasks. But they think of it as troublesome and extra works.” (Interviewee No.20, a researcher working at a government-funded institute)

“We invited officers in charge at local governments and held workshops. But the managers repeatedly changed. [...]. Newcomers for the position do not understand why they should do the jobs (related to climate change adaptation). So, I had to explain again.” (Interviewee No.33, a researcher working at a government-funded institute)

I personally have experienced frequent change of job assignments in a government department. During the period that the interviews were held, the key handler of the NCCAM has changed. The person interviewed in October 2010 was dispatched from another government institution in order to provide

professional advice in the making of the national climate change adaptation master plan. When I visited the department one year later in 2011, the person-in-charge had changed. One interviewee (No.39, a researcher at KACCC) cynically comments about the situation, stating that climate change adaptation is not perceived as urgent or a top priority, hence even the department in charge is not fully supported by the ministry itself. As a result, the interviewee adds, climate change adaptation policies are not welcomed by any government workers.

7.2.2.2 Financial constraints

Along with human resources, financial provision is commonly pointed out as a constraint hampering successful delivery of climate change adaptation policies. What must be taken into account is the fact that this remark must be set against the statements made of increases in funding at research institutions. It is apparent that some see work on climate change as an opportunity, while others deem it to be an onerous task. Interviewees from the government sector complain that they do not have enough money for making adaptation policies and then implementing the policies.

“Even though we make good plans, we can’t do anything without a budget or a managing team.” (Interviewee No.36, a senior level government official)

“Then the government has to give separate budgets to cope with climate change. But it is not like that. We have to do it (implementing adaptation within our existing budget) for ourselves.”(Interviewee No.30, a senior level researcher working at government institute)

Under these circumstances, interviewees argue, government workers should allocate the existing budget to such additional policies as climate change adaptation. In order to avoid budget shortages government workers usually try to select policies from existing policies which are relevant to climate change instead of initiating new policies. The complaints are as follows:

“The government does not provide a budget (for adaptation). That’s the problem. Separate budgets are not allocated. We cannot invest in (projects relevant to climate change adaptation). We only had to change directions under the existing budget.”(Interviewee No.21, a senior level researcher working at a government institute)

Chapter 6 of this thesis pointed out the positive effect of the green growth and low carbon political agenda in providing funds for certain organizations. However, the responses of some interviewees were to reverse the argument; they state that as a result of this political agenda, the street level civil servants are under the pressure of extra duties imposed because of limited financial resources. Therefore, when they have to choose policy options when their budgets are restricted, they choose their organizational key agenda items before climate change adaptation, or amend the title of their policies fitting it to the category of adaptation measures.

“If we have lots of money, then we can invest in them. But in the order of policy priority, climate change adaptation always goes last. With limited resources, the funding priority goes to other areas. [...]. Our ministry recognises climate change as just a factor influencing policies. We should consider diverse variables and choose a few policies among them. Although it (climate change) is an important policy agenda in the present government, it is used as just one of the factors. Climate change is considered in the context of securing a supply of water (for example). At least this is true for our ministry. But it may be different for the Ministry of Environment. The Ministry of Environment may recognize it (climate change) as a key policy agenda.” (Interviewee No.17, a senior level of government official)

The interviewee states that each of the other institutions has its own key agendas, and these are seen from their own perspective. The interviewees working for other ministries other than the Ministry of Environment regard climate change or green growth as a short-term popular theme in the present policy discourse. Climate change along with green growth is perceived as a ‘trendy policy agenda’ which may disappear from new agenda of any future government just as the previous ‘sustainable development’ disappeared under the present government. Therefore, under the pressure of financial limitations, interviewees working in government have to choose their own department’s agenda before someone else’s policies. Their attitudes towards the new policy agenda reflect political inertia: when a new government comes, a new political agenda appears and when it goes, the agenda will go too. Such attitudes can influence decisions regarding policy priorities.

Some reports published by government-funded or government organizations announced that the South Korean government had begun to concern itself with climate change adaptation and was making it a higher priority than had been the case in the past. However, the street level officers who are actually handling

climate change seem to accord it a low priority. Interviewees point out that giving a high priority to climate change adaptation is helpful for successful delivery of adaptation policies. However, many interviewees recognise the NCCAM as only one of the projects managed by the Ministry of Environment and it is insufficiently funded. This reality encourages them to choose their own departmental agenda first, although they may perceive that climate change adaptation is essential.

It does, therefore seem doubtful that the progress which interviewees comment on as being rapid when central government is in control, can lead to the successful delivery of adaptation policies. As the responses made by interviewees points out the frequent changes of job positions can cause disconnects which, in turn, lead to ineffective policy implementation (many interviewees complain of this). It is argued that along with limited human resources financial pressures also result in adaptation measures being given a low priority. Furthermore, such a situation could be a reason for a decrease in a sense of responsibility and accountability for jobs which they undertake. This is often pointed out as a flaw in governance approach, but the same phenomena are observed in top-down approach in South Korea. By analysing the interviews I have found that policy making culture, administrative culture and familism inside the government departments impinge on the process of climate change adaptation in South Korea.

7.3. Constraints imposed by social relationships

I have discussed the constraints observed among institutions of horizontal and vertical relationships. In this section I focus on the special relationships between government and private actors. Some of the advisory board members have special relationships with government even while they act as board members for making the NCCAM. Generally speaking, it is argued that public participation is helpful to the successful delivery of adaptation policies. The general view of stakeholders and NGOs may influence multiple actors' involvement in climate change adaptation. What are the norms regarding public or civil society groups in South Korea? This question is examined using interviewees' responses.

7.3.1. The relationship between government and agents

The South Korean government uses institutions, or groups of experts selected from universities or research institutions, for the purpose of collecting information and advice, and establishing task-force teams or committees. Some of the board members are selected from non-governmental institutions, for instance private university, but they have a limited role in the decision-making for policies owing to the special relationships formed between government and the agents. In Korean culture, the relationship is so-called a 'GAP-EUL' relationship. In this relationship, 'GAP' (usually government side) has power over 'EUL' (usually agent or scholars who carry out projects funded by government or government-funded organizations). Under this relationship, *EUL* try not to disturb *GAP*'s feelings and tend to obey commands from it (the government's order and command). It is not easy for *EUL* to reject or stand against *GAP*'s decisions. A similar unequal relationship may exist inside committees and projects-funded by government. As in the case of the NCCAM, the advisory board members are selected from the experts who have performed government projects and they are appointed by governments, they are very likely to be allocated government-funded projects in the future. Therefore, when the government has already decided a certain direction for its policies, the invited scholars or researchers tend to follow the direction determined by the government. The special relationship with the government negatively influences expression thinking along the line of other policy options. Therefore, it is strictly true that the advisory board members represent public opinion on matter about which they are making policies (Ministry of Environment 2010).

The two arguments below show such a relationship. An interviewee (No.15) states that creating a coping strategy in the water sector was initiated by the increased public concern about the seriousness of changes in water supply:

"There are many cases of extreme weather events. Therefore policy makers and the general public [also] become aware of climate change increase, and they are concerned about how water shortages or flood events would be impacted more by climate change in the future. So we (the public in South Korea) thought that we need to adapt to the change and *encourage policy*

makers to act". (Interviewee No.15, a senior level of researcher, government-funded institute)

When the interviewee's statement of '*encourage policy makers to act*' was accidentally given to a government official who was in a position of '*GAP*' with respect to the interviewee (No.15), I heard a very different story which conflicts with the statement.

" if we see the case, that is the procedural issue. When we talk about the case of climate change coping strategy (for water sector), the first task is to make decision in the department of water resource (in Ministry of central government). Their priority (policy priority) is not climate change adaptation, but to secure management of water resource. In order to achieve the goal of policy, if we need a research, we make a contract with engineers for the delivery of policies. The work process is not the other way: a researcher suggests a policy agenda to the policy maker. [...] The engineers at the institutes are not a commander, but we (or the department of a ministry)." (Interviewee No.17, a senior level of government official)

The interviewee (No.17) comments that engineers who work at government-funded institutes are only contract workers who should work on the instructions of the government. When asked how recommendations made by experts in the institutions are prioritized and policies are chosen, one interviewee (No.17, a senior level government official) answers in an unpleasant voice, that the researchers do not order policy makers to make policies, on the contrary policy makers request researchers to perform certain types of research which the government perceives as *needful*. Owing to this policy culture, the participation of experts in making policies is inclined to become *pro forma*.

Interviewees who are policy makers working in central government among the interviewees even doubt the ability of experts on the advisory boards. Their concerns are, for example, that sometimes researchers tend to get involved in so much technical detail that they fail to consider the practicability of their policies. Some of interviewees comment that experts on the board need to be controlled by the policy makers setting the boundaries within the experts must work unless it is established that they have to go beyond the scope of the policies. Regarding the role of in the advisory board, some interviewee plainly state that they are simply commentators on the documents and should not be suggesting policy

directions (comments by Interviewee No.5, a professor at a university; No.30, a senior level researcher working at a government institute; and No.35, a senior level researcher working at a government-funded institute).

“We (Experts) gave our opinions to the Korea Environment Institute or Korea Adaptation Center for Climate Change, and then authored the Adaptation Measures. I am commenting only on the contents.” (Interviewee No. 35, a senior level researcher working at government-funded institute)

When central government makes decisions on a policy agenda, it requests professional and technical opinions from the experts who work at the government funded institutions or universities in order to collect more diverse ideas. As discussed, cognitive inertia in both experts and government challenges the instrument of a type of participatory governance. However the experts' opinions should take into account the limitations of governmental budgets and working practice.

Some interviewees argue that knowledge and concrete data about impacts and potential risks are very critical for making practical strategies to cope with climate change. Interviewees claim that they are not happy with an inappropriate process of making adaptation policies which insists that before a basic framework is fully prepared the administrative officers have taken command of the policies making.

“Basically if impact assessments and relevant data are sufficiently completed, then the policy goals could be quantified... many things are postponed and reversed.” (Interviewee No.28, a researcher at KACCC)

“Impact assessment is required. [...]. We should invest more in research.” (Interviewee No. 8, a senior level researcher working at a government-funded institute)

“Therefore vulnerability assessment and cost benefit assessment should be done correctly in order to decide priorities. Don't you think so? As you see (at NCCCAM), the scope of adaptation is very broad and diverse because VA (vulnerability assessment) has not been done beforehand.” (Interviewee No. 5, a university professor)

“(Especially) the local governments have very limited data about what impact will be posed and which sectors will be vulnerable to climate change. It is said that participatory methods can be used in such situations. But it is impossible for the metropolitan councils to make use of participatory methods. [...]. But we have limited data (about vulnerability and impact) and have to set up adaptation policies. So we try to make a strategy with limited information and later amend it. (Interviewee No.33, a researcher working at a government-funded institute)

Interviewees, mostly those who are researchers think it rational that at the outset of creating the national climate change adaptation measures, the government should spend more money on collecting scientific data and making those technical advances which will be very useful to those involved in creating adaptation policies. On the other hand, the policy makers amongst my interviewees argue that they know about the phenomena of climate change but they do not clearly understand what policies should be established; they need to know how much damage is likely to be inflicted by climate change, and what benefits they can expect will accrue from the adaptations.

Although the NCCAM include policies to support investment in technical development, the advice of researchers is not taken very seriously in the case of South Korean adaptation policies. Moreover, policy makers do not fully trust the reliability of the data the researchers produce, nor its veracity as the basis of making policies. Even some researchers also do not perceive their roles seriously (Interviewee No.5 and No.35). In a situation such as this, policy recommendations emanating from researchers are not readily accepted by policy makers. A couple of interviewees state plainly that they have followed the usual procedure of attending several meetings organized by the Korea Adaptation Center for Climate Change; and that they replied electronically to the drafts of the national adaptation master plan commenting on the technical aspects of the document but that their comments appear to have carried little weight. Although there is a process in place of collecting diverse opinions, the role of experts as the advisors for the NCCAM does not seem to be recognised as significant.

7.3.2. Prejudice about stakeholders

Referring to the Framework Act on Low carbon, Green growth, one interviewee (Interviewee No.37, a government official) emphasizes the need to have stakeholders participating in making adaptation policies. However, most interviewees express negative opinions regarding stakeholders' participation in making adaptation measures. One reason pointed out by interviewees is that

stakeholders often act primarily in their own interests, which leads to negative reactions from the general public. One interviewee cites an example of a flood prevention strategy. One reason for rejecting the flood prevention strategy - setback from the coastline to a more safe area- is the result of the selfish concerns of local stakeholders:

“That (flooding event) is connected to the benefits of local construction companies. If there is a flooding event, that could be a chance to make money for local construction companies. The situation hinders making new (prevention) policies. They (local stakeholders) oppose it by arguing; why don't we build the conventional dyke, instead of trying to use unproven new methodologies.” (Interviewee No.41, a senior level researcher working at a government-funded institute)

The interviewee adds another reason why the new regulation is difficult to implement in South Korea. This reason supports the arguments of those holding sceptical opinions regarding the participation of stakeholders, demonstrating how they could have a negative influence on local adaptations to climate impacts:

“Seventy-eight per cent of the national industrial complexes are located along the coastline in our country (South Korea). Owing to their high commercial property value, the owners of the properties in these regions are not happy with the setback strategy of relocation and the introduction of buffer zones in the vulnerable areas” [...]. That's on account of their rights. [...] It is not easy for them to give up their rights and profits. It will impinge on their property rights. For example, if we relocate people in the region 'A' which is very close to the seashore' to region 'B' which is a bit distant from the coastline, the government should compensate for the difference of price by exchanging the land they give up. [...] In the case of highly dangerous areas, we should explain the situation very carefully and make them understand the seriousness and unsafely, and try to not cause them any loss, for instance, by giving them larger land in the relocation areas than they had at the previous one.” (Interviewee 41, a senior level researcher working at a government-funded institute)

Another interviewee (Interviewee No.5) tells a story about the negative influence of public opinion, commenting that there are some issues which arise from the publication of vulnerability assessment maps in South Korea. This interviewee argues that if people know that their property is vulnerable to floods and the information is open to the public, they will be alarmed because their property may be devalued:

“These days we have so many stakeholders. [...] If it is reported that some places are vulnerable (to floods), then it could devalue the land price. Stakeholders will not be happy with the report and request to open what the report is based on. (But) we cannot give an adequate answer because of the high degree of uncertainty which is

a feature of the present forecasting mechanism.” (Interviewee No. 5, a university professor)

Thus interviewees have negative opinions regarding stakeholders' participation in decision making, and think of stakeholders as trouble makers and self-interest groups who work for only their own benefit. One interviewee argues that successful adaptation could rest on how well local collectivism and 'naysayers' are dealt with (Interviewee No.36, a senior level government official). Such negative images regarding stakeholders, including Non-Governmental Organisations (NGOs), has been exacerbated by the experience of the previous government (the President Rho government) which tried to utilize public engagement more than other governments have (Park 2010a). Non-governmental organisations or civil society organisations (CSOs) are seldom allowed to participate in the process of making policies in South Korea. Only since the early 1990s, could CSOs and NGOs engage in the process of making policy through different types of committees, forums and in research (Jeon 2010b). Public engagement in the decision making process about policies does not have a long history in South Korea and is still perceived as unfamiliar in its political culture.

When a question was asked about whether civil organizations and NGOs should be participating in the process of making the NCCAM, one interviewee (Interviewee No.27) answered that the national adaptation policy is a master plan in the creation of which the NGOs or civil society organisations did not need be included. Interviewees seem to think NGOs are not qualified to become involved in making decisions about the policies. The following responses show negative attitudes towards NGOs:

“Practically, that (the National Climate Change Adaptation Measures) was not what NGOs got involved in. If someone doesn't know what national policies are and what are the implementation procedures, it is not possible to get involved in (making policies) and to screen the policies in a short time. As you know, NGOs could provide the ideal ideas and suggest the right direction, but they can't make the detailed policies. That's why NGOs have not been invited yet. Later, at the stage of implementing each sectoral delivery of policies, NGOs can participate. But in making a general framework, it seems inappropriate (to include NGOs).”(Interviewee No.28, a researcher at KACCC)

“That's right. NGOs don't know enough about national policies or national budget mechanisms. But the FALG considers that the process of making local adaptation action plans should include stakeholders. Stakeholder means local people and

NGOs, local academics and local government officials.” (Interviewee No.37, a senior level government official)

Negative attitudes towards NGOs or CSOs are observed in the responses of interviewees. General views regarding NGOs and CSOs in South Korea are similar to the interviewees’ views (Ra 2006): weak capacity, dependence on government support, and working only for their own benefits rather than for public interest. The prejudice shown towards private actors may prevent the opportunity being taken to open up information to the private sector and asking for opinions from diverse members of society.

7.4. The policy making culture

Thus far I have discussed the culture of society or institution and social opinions about private actors in South Korea and examined how these constraints influence a successful process of climate change adaptation. Now discussion will focus more on the political or policy making culture observed in the process of making national climate change adaptation measures. As discussed in Chapter 3, the culture of making policies in South Korea can be described as central government led and a bureaucratic approach (Kim 2009; Park et al. 2012a; Lee and Kim 2010). The political culture is a mixture of subject and participant, authoritarianism and conservatism rooted in Confucianism, and anticommunism. This section will discuss how such a political culture is expressed in decision-making about the NCCAM. When policy makers make decisions about special policies such as climate change, the usual procedure is for government to create advisory boards composed of experts or special committees. In this section how the advisory boards and the committees work under the influence of these political cultures is examined.

7.4.1. A top-down approach

It is obvious that central government plays a key role in the making of adaptation policies to cope with climate change in South Korea. Some of interviewees remark that a top-down approach is perceived as a positive factor

in making adaptation policies at the initial stage. Interviewees argue that it can also be expected to contribute to the efficient delivery of adaptation policies down to local levels, the interviewees argue. Some of interviewees state proudly that the recent speedy progress in developing climate change policies in South Korea is attributed to the national green growth political agenda selected by the present government. On the other hand, other interviewees have different views regarding the way of approach adopted and are sceptical about the practicability of the policies at the stage of implementation. An interviewee (No.28) who was directly involved in generating the NCCAM also doubts the substantial implementation of the policies:

“The MB government is interested in (climate change). But I am not sure that this interest will follow through generating practical national policies: to allocating budgets. Although we make plans to cope with climate change with the help of more senior officials, I doubt that practical actions will materialise.”(Interviewee No.28, a researcher at KACCC)

Another interviewee (No.30) also cynically commented that the government adopted the process of making the NCCAM as similar as usual policy making procedure. Owing to orders from high level politicians, policy makers have to show some outcomes and that they have taken some actions. Therefore they select some policies from the existing similar policies and rearrange them:

“(Decision makers) should understand the importance of the project. [...]. As the process is not easy, although the agenda has been passed, the next step needs to be approved by the Cabinet. [...]. The right process is like this: we set a goal (based on data) first that the policies can obtain. But we are doing it backward. We select policies from existing ones (without correct data and information).” (Interviewee No.30, a senior researcher working at a government institute)

Some interviewees complain about the bureaucratic way of making adaptation policies and express concern about such procedures. A command from high level politician makes policy makers generate policies in haste, even before policy makers have collected sufficient data or information from which to select proper policy options. Others express uncomfortable feelings about the pressure exerted by high level government official commenting that they are obliged to make policies to meet the requirements set out by high level politicians rather than substantial policy goals.

“The MB government enforces mitigation and adaptation (to climate change). So adaptation policies were selected from the exiting polices which seemed relevant to climate change. It is asked why these are adaptation policies, but no one has the

answer. The current process is going in the opposite direction.” (Interviewee No. 26, a senior level researcher at KACCC)

A top-down approach to climate change adaptation has been pointed out as a positive driving force for making a good progress by some interviewees (refer to Chapter 6). In this chapter it has been shown that other interviewees express sceptical views regarding the procedure. Although these interviewees acknowledge the procedure has its weaknesses, the general attitudes in the process of making the NCCAM seems to have been that the best way forward is to follow the usual procedure of policy making.

7.4.2. Bureaucracy

One of the political cultural characteristics of South Korea is bureaucracy in administrative structure. Even an interviewee who is a government official (Interviewee No.38) claims that the South Korean government has strong bureaucratic barriers so that it is not easy to implement policies. Such a bureaucratic culture has been observed in climate change adaptation.

One of example of the bureaucratic attitudes of policy makers is seen in a distrust of researchers. Sometimes policy makers receive technical advice for making adaptation policies and changing the routine regulations, but, they seldom take the advice seriously. There was a serious event caused by ignoring professional advice from experts. The story of a massive black-out shows how serious problems can result from the influence of the bureaucratic culture of policy makers.

The massive blackout began on the afternoon of 15th September 2011 in South Korea:

“Although the Korea Metrological Agency announced a warning that this year, the temperature will go up and it is extremely hot; the summer will continue until late September⁸, people didn’t take it seriously and thought it would be all right. They (decision makers) ignored the warning and, as usual, shut down some power stations for regular check-ups. But people (the public) kept operating air conditioners and consumed energy as much as in the summer because of the hot

⁸ Summer in South Korea usually ends in late August.

temperature. Therefore base energy was not enough (to bear all the energy consumption), which caused the massive black out.” (Interviewee No.28, a researcher at KACCC)

In 2011, South Korea had an unprecedented heat wave with the average maximum temperature of over 30 degree Celsius in the middle of September. Although the Korea Meteorological Agency had warned that there would be a heat wave in the country, the Korea Power Exchange did not take the warning seriously and retained the business as usual scenario of their power-demand and supply plan with a maximum power demand of 6.4 million kilowatts, this was not sufficient for such hot weather (Hong 2011; Kim et al. 2011). The Korean Electric Power stopped 15% of the power generators for annual inspection, disregarding the warning. However, the temperature went up and the demand for electricity increased beyond the capacity of operating power generators. In order to prevent the overload of power generators, Korean Electric Power decided to cut off the electricity supply throughout the country on a rotational basis starting from 2:30 pm to about 4 pm when they observed that the reserved electricity became lower than 15% (the reserved electricity should be maintained at a level of over 15%). This electricity cut-off resulted in financial damage of 30 billion in Korean currency (KRW), which is about 17 million GBP (Segye 2011). Many people who were involved in the incident were fired, demoted, or resigned, including the Head of the Ministry of Knowledge and Economy (Kim 2011b; Jeong 2011). The incident demonstrates that there is a failure to take technical knowledge seriously. Although there were warnings about the risks caused by climate change, policy makers ignored them. After the incident public opinion swung behind the creation of adaptation strategies to cope with climate change and there was a noticeable change in behaviour. However, the concern was not sustained for long. According to a news article, people turned on air-conditioners even in May 2012 as soon as they felt hot, it was as though they had forgotten the black-out in 2011 (Park et al. 2012b).

One interviewee (Interviewee No. 28, a researcher at KACCC) argues that policy makers and general people should change their perceptions and behaviours in order to cope with more frequent heat waves in future summers stating that the blackout incident is a good example of risks occurring without

precautionary adaptation strategies having been formulated and the way of policy routine can make for serious problems.

The black-out case shows how the bureaucratic attitudes of policy makers can hamper effective climate change adaptation. As discussed in the section on 'the relationship of government and agents, especially with technical experts, on one hand, the members of the advisory board argue that scientific information and technical knowledge are an essential element to making successful coping strategies; on the other hand, the real actions are likely to follow the policy routine imposed by an attitude of bureaucracy and elitism on the part of government officials: policies belong to policy makers who consider that they know best. If the advice of the professional experts had been taken more seriously and had influenced the decision-making, the accidents need not have occurred.

7.4.3. Political populism

The next feature of the policy culture observed in South Korea is a politician's key concern of assuring that they gain the voters. The term of elected politicians is four years in South Korea, which is not long enough to achieve the goals for most actions targeted at adapting to climate change. The fact makes politicians turn away from long-term policies to adopting policies which can show effects in short-term such as building dykes or visible infrastructure. Such political populism on the part of politicians can influence decisions about adaptation policies. This section discusses how such attitudes can affect adaptation to climate change.

An interviewee expresses an opinion about a potential challenge to the implementing of climate change adaptations which is related to the time frame difference between the administrative system and climate change adaptation system. The effect of adaptation actions does not always appear immediately rather does it often take a long to show the results. This fact sometimes makes policy makers work hesitant.

“Using climate change as a theme helps to attract funding by the current government. However the long-term feature of climate change acts as a barrier.” (Interviewee No.33, a researcher working at a government-funded institute)

This interviewee (Interviewee No.33) argues that politicians do not usually pay attention to policies which take longer time than their terms of office, because there is a premium on showing the effectiveness of their activities. If this is not visibly effective, the politicians are reluctant to support the political agenda; instead, they prefer to build infrastructures which readily attracts public (voters) attention and is a substantial policy service to the voters in the short-term. Under this South Korean policy making culture, politicians act as one of the most powerful agenda-setters at both central and local level. They choose policy options by which they can achieve populism, that is, votes in election. Because of this it is difficult for politicians to properly prioritise precautionary adaptation policies. Thus political culture and the attitudes of politicians affect the directions of policies and the decisions made. If there were a variety of participants, this might overcome the influence of the biases shown by politicians.

7.5. Potential constraints at the local level

Most of my interviewees are members of the advisory board for making national climate change adaptation policies. However, some of them are involved in creating action plans for local level adaptation strategies too. Even though this thesis focuses on national level climate change adaptation, I had opportunities to ask questions about local level actions related to climate change adaptation. This section discusses how political culture in climate change policies can influence local level policies.

The role of local governments is seen as an essential determinant for a successful climate change adaptation. However in the case of South Korea, there is no formal mechanism for local actors to participate in making adaptation policies for national level adaptation policies. Some of the interviewees blame local government’s dependence on central government for funds:

“Local authorities are not working well in our country (South Korea). Except for big cities like Seoul city, usually the state handles everything. Local authorities do not

feel uncomfortable receiving support from the central government. When a local government decides to build a road or construct a dyke, then the local government asks for help from central government. Then central government will provide everything. As such, local governments are highly dependent on the central government.” (Interviewee No.7, a senior level researcher working at government-funded institute)

This interviewee (Interviewee No.7) implies that the weakness of local governments in handling climate change policies results from local government’s unwillingness to take autonomous actions to cope with climate change impacts. However, another rational reason for local government’s dependence on central government is that most local governments have a low fiscal self-reliance ratio so that they are likely to depend on central government’s support (Lee 2009; Park et al. 2012a). There is another legal constraint making it difficult for local governments to take actions in advance. According to the Countermeasures against Natural Disasters Acts⁹ (Clause 5 of Article 3), the head of the municipal authorities should take action to prevent natural disasters ‘with the help of central government’. Due to this Article of this law, the local authorities commonly depend on central government to make general plans to reduce the damages caused by natural disasters, and risks posed by climate change are included in this. Article 3 of the Countermeasures against the Natural Disasters Acts also clarifies the location of responsibility; it belongs to central government stating that ‘central government should provide financial and technical support to protect the safety of people’. This context is used as the rationality for local authorities not to take the lead roles in precautionary actions to cope with climate change at local level. There is another relevant legal source to inhibit the local governments taking adaptation actions. According to the Local Government Acts in South Korea, local governments are not allowed to react to disasters autonomously without consultation with central government (Lee and Kim 2010). It is evident that these laws legitimize local governments depending on central government and their hesitation in taking precautionary adaptation actions. If disasters occur in the local areas, the cost of recovery basically would be provided by central government in South Korea. Therefore local governments usually wait for help from central government (Sourced by an interviewee (No.41, a senior level

⁹ The state, in accordance with the Acts and the purpose of the Acts, shall take responsibility for making a precautionary general plan with the view of protecting people’s lives and bodies and property and should provide maximum financial and technical support (Own translation from the Korean script).

researcher working at government-funded institute). The legal system constrains multilevel participation in decision making regarding climate change policies.

Here is an example describing how South Korean institutional structure hampers multilevel governance approach. In 2011, local governments began to make local action plans for climate change adaptation under the support and control of central government. The costs for making the policies are partly sourced from central government: about 50% of the cost for the making of local climate scenarios and assessing local specific vulnerability to climate. The other 50% is the responsibility of local government (informed by Interviewee No.32, a researcher working at a government-funded institute and No.38, a government official).

So far, I have discussed administrative and institutional structures that can hamper a multilevel governance approach to climate change adaptation. One interviewee (Interviewee No.33, a researcher working at a government-funded institute) points out a lack of cognition of the essence of climate change adaptation as a potential local constraint. The interviewee tells a personal experience of working with local civil servants: at local government level, climate change adaptation is regarded as the same activity as taking countermeasures against natural disasters and the strategy for the prevention of natural disasters is not a novel policy. The interviewee remarks that for local actors, making an action plan for climate change adaptation is onerous because it has been ordered by central government. Hence they tend to accept it as unnecessary and unimportant and even a tiresome administrative task (Interviewee No.33, a researcher working at a government-funded institute). Orders issued by central government, especially when local governments are not yet in a position of implement them, can result in the making of impracticable policies (Kim 2009; Shim 2002; Lee and Kim 2010; Park et al. 2012a).

Two interviewees (No. 33 and No.38) indicate that central government knows that local governments are not capable of fulfilling the command from central government, so that central government will have to provide scientific data and

technical support. The solutions prepared by central government mainly focus on physical and technical support not on social or cultural aspects; for example, raising consensual awareness about the essence of climate change adaptation and receiving information from local areas. Besides, as one of the interviewees (Interviewee No.33, a researcher working at government-funded institute) argues, the data provided by central government is sometimes not applicable or useful at the local level.

Some of the interviewees (Interviewees No.13, No.33 and No.38) argue that when private actors are not invited to the process of making the national adaptation policies, whereas local policy makers will invite stakeholders to the making of local adaptation plans which is a stated requirement at the Framework Act on Low carbon Green Growth (FALG). However, one interviewee expresses a sceptical concern about this recommendation, arguing that under the current circumstances, it is almost impossible to invite private actors to decision making at the local level:

“Our province is big with many cities and counties. [...]. Provincial governments should be supported by those cities, but local governments at city level do not participate in making present adaptation action plans. To make it right, firstly cities and counties make plans, and then the provincial governments have to adapt (to climate change). But always provincial plans are made first, so it is very difficult to consider all the cities’ situations.”(Interviewee No.33, a researcher working at government-funded institute)

As some of the interviewees indicate, a top-down approach to making adaptation policies brings about problems to local climate change adaptation based on the following attitudes of central government: (1) The negative preconception of a local capacity-central government underestimates local actors; (2) Without taking account of local situations, the top-down approach leads to inappropriate strategies for local adaptations; and (3) In reality local level governance has not yet arrived at a consensus about what climate change adaptation measures should be made. These potential constraints will hamper the progress of local level adaptations.

I have discussed constraints on successful climate change adaptation focusing on the political culture, policy culture in South Korea as well as prevailing local constraints. As observed in the responses of interviewees, political culture or

the policy style can hamper effective delivery of climate change adaptation in South Korea. Besides this the administrative culture and structure also hinder a governance approach to successful climate change adaptation. Most of the expressions of dissatisfaction discussed in this chapter are related to political culture and policy routines. In addition to these cultural aspects, an inadequate local technical advance has been pointed out as a challenge to successful adaptation.

Thus I have explored the reason why some interviewees are not satisfied and what they think as constraints for successful climate change adaptation from the perspective of political culture. Based on the findings of the analysis of interviews, the following section will outline the general arguments of this chapter.

7.6. Summary

Chapter 7 has discussed the negative responses of the interviewees about the process of decision making about climate change adaptation policies in South Korea. The key point under discussion is the investigation into the influence of political, administrative and social cultures in the decision making. These include constraints posed by a lack of horizontal and vertical cooperation in government and a lack of resources in the organizations. The characteristics of the political culture of South Korea are observed as a top-down approach to policy making; bureaucracy operating under the influence of Confucianism and the effect of populism on politicians striving to win votes. Political culture also includes special relationships formed between government and groups of experts can be a hindrance to the development of participant and active political culture and a governance approach in the delivery of climate change adaptation policies. Besides, the negative views held by government bureaucrats towards private actors hampers involvement of multiple actors including non-governmental organizations and stakeholders in the decision making. The authoritarian way in which high level politicians have instituted and guided policy making and implementation have, it has been claimed, worked well by speeding up the creation of climate change policies and making policy makers

take climate change more seriously than before. However, there have been doubts raised about the substantial effectiveness of climate change adaptation in the long run. The constraints observed or pointed out by the interviewees may pose challenges to a governance approach to the successful delivery of adaptation measures in South Korea. Table 17 briefly outlines the overall constraints pointed out by the interviewees.

Table 17: Interviewee response regarding negative factors (Source: The author of this thesis)

Interview topic	Summary of the responses
Institutional culture	Lack of inter-governmental cooperation Intra-governmental problems Weak capacity of local government
Resource constraints	Human and financial resources Technical barriers
Perception barriers	Collectivism of stakeholders Societal unequal relationship between government and the advisory board
Policy making culture	Bureaucracy State-centric command system Political populism

The administrative culture of changing key policy agendas with changes of government has raised concerns about climate change policies. Under the green growth trend, climate change has become part of the political discourse. When there is a change of government, the green growth and climate change agenda may lose their positions as hot policy agendas. Policy disconnections between present and new governments may change the whole map of climate change policies in South Korea.

State centric and bureaucratic inertia have been observed as the key feature in the making of adaptation policies in South Korea. In Chapter 6, a top-down and command approach from central government are referred to as a positive factor for effective delivery of adaptation policies in South Korea; however, based on the analysis of interview responses, the orders from high level politicians or central government do not seem to guarantee effective implementation of adaptation policies. At the beginning of policy making, a directive from high level leaders seems to work well and drives progress forward; however, the practical delivery may not proceed well.

The traditional government paradigm, which is a vertical and top-down approach, seems to work well in terms of speeding up progress at the initiating stage. But implementing the policies and achieving the goals of adapting to climate change can be different. The aim of climate change adaptation is generally conceptualised as building a society which is secure and safe from risks and transforming a society so that it is resilient to unexpected changes caused by climate change or variability. If the adaptation policies are made in a hurry by some high level politician whose main concern is to draw the attentions of voters, these goals will not be readily achieved.

The South Korean policy culture is generally characterised by the words of authoritarianism and a mixture of subject and participant political culture (refer to Chapter 3 of this thesis). The attitudes of policy makers influenced by authoritarianism and bureaucracy create an atmosphere of resistance to the adoption of diverse policy options which may adapt to climate change more effectively. Policy decision makers commonly distrust stakeholder's participation in making policies, because they think that stakeholders place their own welfare before that of the community at large. Such a concern is imposed by the social culture of Confucianism: the state is always right and government officials are better than the general people,

No government is capable of determining social development in a complex, dynamic and diverse society by itself (Eun 2011a). Climate change policy should be handled by the participation of multiple actors. Lim and Tang (2002) optimistically judged that there would be an improvement in environmental policy governance in South Korea, but there have been few changes in environmental governance systems in South Korea in the past 10 years (Lim and Tang 2002). The current government is criticised for returning to a more bureaucratic form of government administration by some scholars. Under these conditions, it is not easy to be readily expected that participatory governance by multiple actors will be developed for climate change adaptation. Moreover, there are doubts expressed about governance approach, arguing that a governance paradigm is a 'practice-driven model' borne in western government history so that it is not well fitted to Korean policy culture (Eun 2011a). Thus the difficulty of a governance approach regarding climate change adaptation results from not

only the powerful state but also the political culture and policy inertia. Although scholars argue that a governance approach to climate change and the involvement of diverse actors provides more opportunities to achieve successful adaptation, in some societies it may take time to change the political culture or the policy making culture.

The general characteristics of the South Korean political culture do not fit into a western-born governance approach. But there may be one advantage to Confucianism: when I asked about what would happen when they do not achieve the goal of their policies; and if there are any incentives or punishments, one interviewee answered: 'then the person-in-charge would lose face in front of the others'. The culture of the high placed authority figures keeping face may act as a motivation for the progress of adaptation policies.

Chapter 7 has highlighted and discussed how the political culture has impinged on the decision making process by analysing interviews. The challenges and barriers posed by political and social culture may adversely influence the delivery of adaptation policies as well as a governance approach to climate change adaptation. In Chapter 6 some of interviewees have argued that progress in making the NCCAM has been rapid and efficient. However, there are concerns about whether the policies would be delivered successfully under the command and control of government.

I have been discussed matters which have caused satisfaction and those which have caused dissatisfaction among my interviewees regarding the process of making the NCCAM and have examined the way in which the political culture has influenced decision making about climate change adaptation in Chapters 6 and 7. Following on from the analysis of these interviews, an overview of the conclusions and the whole spectrum of this research will be discussed in Chapter 8. In that concluding chapter, I will demonstrate how this research can contribute to knowledge advancement; and what the findings mean to research into climate change adaptation and close the thesis with some suggestions for future research undertakings.

Chapter 8. Discussion & Conclusion

“In other words, adaptation is a multi-scalar process of multi-level governance, concerned with the interaction of individual and collective behaviours acting from the bottom-up and the top-down in response to changing circumstances (Adger et al. 2009a, p.10)”

8.1. Introduction

In spite of global efforts to mitigate climate change, the impacts caused by these changes will continue for a while, and adapting to climate change adaptation is essential and not optional (Adger et al. 2007). Global discourse and policies regarding mitigation have been more intense than those on climate change adaptation. Recently adaptation has also drawn the attention of academic scholars and policy makers, and a number of studies have been performed. However there are a few publications dealing with the value or culture factors which influence effective climate change adaptation (Barnett 2010). Notably, as I have argued in the introductory chapter, there is very little research about the decision-making process regarding climate change policies from the perspective of political culture. In response to this academic gap, I have investigated how and which aspects of the political culture have been evidently expressed in the way of formulating climate change adaptation measures in South Korea. The dominant political culture involved in decision-making and the way of its influencing a governance approach to climate change adaptation in South Korea have been examined. Taking into account the powerful influence of a national political agenda, I have sought to answer the following questions: What relationship has been formed between government and groups of experts who are appointed as the advisory board members? And how has the general relationship between central government and local governments changed in the context of climate change adaptation? This concluding chapter interprets the findings from the research addressed in Chapter 5, 6 and 7 and discusses the meaning of these findings in the context

of climate change adaptation, and the influence of political cultural on a governance approach.

The findings generated in this study can make a contribution to an understanding of the situation in a society where participatory political culture is restricted and the role of public engagement is not naturally recognized in policy decision-making. It can also provide a theoretical background for an empirical study of climate change adaptation which recognises the full weight of political culture. This study therefore helps to better understand the reasons for limits in governing climate change adaptations. Before closing my argument, I propose a few suggestions for further research.

8.2. The role of political culture in creating adaptation policies

As the first step in closing my argument, I will discuss the role of political culture in climate change adaptation highlighting the key findings from this research. For that purpose, this section provides an overview of the findings discussed in Chapter 5 over through Chapter 7 of the thesis.

The advisory board was supposed to become an instrument for reflecting the way of participatory governance in the decision-making about the national climate change adaptation measures. However, the role of the advisory board did not seem to be fully realised owing to the political culture or the social culture of South Korea. Such challenges were identified at the first step of policy agenda-setting until the stage of choosing policy options. This was shown by the fact that there is little documentary evidence of public engagement or private participation in the initiation and decision-making stages of the climate change adaptation process. There are some reports regarding meetings held to draft the NCCAM where bargaining among participants concerning the phrases used to express policies took place. The secondary sources show that although climate change adaptation is a novelty to the policy agenda in South Korea, the policy making process seemed to follow the usual decision-making routine: the strong influence of a powerful central government and of high level politicians, with very limited governance approach. In order to support the findings of this

documentary analysis, as well as to articulate the arguments put forward the interviews have been recorded and examined in Chapter 6 and 7. These responses have been divided on the basis of two main themes: those based on positive attitudes and those based on negative attitudes towards political culture as expressed in making climate change adaptation measures. It has also been observed that the interviewees' political attitudes were reflected in the governance of climate change adaptation.

The government of South Korea has announced green growth and low carbon as its national paradigm, this paradigm, most interviewees argued has worked positively on the progressive development of climate change policies. The government has established a special committee and the advisory board as possible mechanisms to create forums where various opinions can be expressed in order to facilitate more effective adaptation policies, but their roles have appeared to be limited because of special socio-cultural relationships and political culture. By documentary analysis and interviewing advisory members, I have sought to identify the challenges facing climate change adaptation through a multilevel participation in a governance approach. A top-down political culture and the powerful role of government role has tended to ignore the role of stakeholders and technical experts in the management of climate change adaptation. The case of the NCCAM of South Korea has shown a subject political culture rather than a mixture of subject and participatory culture which has been identified as the general characteristic of the South Korean political culture (Lee 2003). Any single policy maker cannot understand all problems nor provide solutions for them, especially regarding climate change. The sharing of power and information with multiple and multifaceted actors is essential when dealing with an complex issue as governing climate change and adaptation. However, the state-centric approach to climate change strongly influenced by the dominant political culture of South Korea limits multiple actors' involvement in decision-making regarding climate change adaptation. The overall discussion about the key findings and contribution to academic advance about the research will be argued in the following sections.

8.2.1. What should be achieved by adaptation policies?

Climate change adaptation in this research refers to the actions that people take in response to, or in anticipation of, projected or actual changes in climate, to reduce adverse impacts or to take advantage of the opportunities presented by climate change (Adger et al. 2007). Although the concept is accepted in the South Korean academic society as the definition of climate change adaptation, the national climate change adaptation measures (the NCCAM) includes the national paradigm 'green growth' in the vision; building a green growth society. But it is not necessarily related to adaptation and instead it reflects the allegiant attitudes of policy makers towards a hot political agenda item. The achievement of the vision of adaptation is supposed to lead to successful adaptation. As discussed in the thesis, increase options for adapting to climate change through the participation of multiple actors from diverse areas. The question regarding the vision and the goal of climate change adaptation in South Korea was asked to the interviewees; some of the responses have shown a utilitarian approach towards delivery that provides benefits to as many people as possible; while others have expressed an egalitarian approach arguing that the essence should be making provision for the social and climate vulnerable groups. Many interviewees highlighted the importance of positive attitudes towards climate change; climate change and adaptation to it should be taken as an opportunity as well as a risk. However, it was not sure if the opinions of advisory board members were adopted in the formulation of sectoral goals in the NCCAM. The policy goals are generally established by government officials in the departments.

8.2.2. Why do some feel satisfied?

Some of the interviewees have argued that the command and control of a government-led bureaucratic approach has become the driver for making climate change policies. Analysis based on the results of this research, show that the mode of adaptation governance is of the more hierarchical type than

participatory in South Korea, where the responsibility for policies resides with central government. Chapter 6 of this thesis explored the substantial reasons of the interviewees feel complacent about the progress of climate change adaptation in South Korea. Summarily, under the strong command and control of central government, the progress of climate change adaptation has been promoted following the usual policy making style in South Korea. The reasons for their expressions of satisfaction emerged as two themes: the green growth and low carbon of national paradigm; and the global trends of discourse about the need of taking adaptation actions to climate change. The interviewees identified the present government (at the time of doing the research) of South Korea as the key driver of the policy agenda with the help of increased extreme weather events. The practical reasons for the satisfaction are that the interviewees have had more opportunities to benefit from contracts made with government for carrying out projects or funds for the research from the government. Using the argument of capacity building, many interviewees have claimed that the government should invest in research about scientific and technical advancement. Here capacity building does not necessarily mean the capacity of the country for coping with climate change. Rather, the responses can be interpreted as capacity building in their organizations. When they expressed satisfaction with the progress, they generally stated that they have achieved a speedy and prompt 'mission'- making the NCCAM within a certain time frame stated in the FALG. They could show the government the outcomes of the actions. There have been no substantial monitoring and evaluation phases for the NCCAM, so that the actual outcomes of policy delivery have not been evaluated.

Talking about the progress in the context of participatory governance in South Korea, there was little room for multilevel participatory governance during the time when the NCCAM was created. Most interviewees have admitted that climate change adaptation policies in the NCCAM have been controlled by central government, and argued that a powerful state and strong leadership are very helpful for making adaptation policies in efficient way; however, some scholars insist that successful implementation requires the involvement of the public rather than state-centred process.

8.2.3. The influence of political culture on climate change policies

In the beginning the climate change policies of South Korea had been narrowly framed for focusing on committing to the agreement to the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 or negotiating the multilateral international agreements. As the global and domestic discourse about climate change and impacts have increased, the South Korean government has decided to change the scope and structures of climate change policies (for more detail, refer to Chapter 5 of this thesis). The focal point of climate change policies is mitigation rather than adaptation. Still today, coping with climate change is largely focused on reducing gas emissions with the provision that it does not harm the national economy. As the Lee government (the reins of the government is from 2008 to 2013) set up 'green growth and low carbon' as a new national paradigm, the momentum with regard to climate policies seemed to have gathered pace in terms of making national policies and binding regulations. However, all of the steps of making the coping strategies or national climate change adaptation policies, from taking the initiatives to the stage of decision making regarding policy options, have been commanded by central government by means of a hierarchical ordering system. The governance arrangement which appeared in the process is a hierarchical governance mode rather than a type of participatory governance.

The expert groups invited as the advisory board members were expected to provide professional advice and supposed to represent the private sector. However, in reality, the state bureaucrats have played the role of key decision makers and have drawn the boundaries for the policy options. The political culture have challenged participatory governance mode in the decision-making of the NCCAM and limited the role of the advisory board. Moreover, the institutional culture hampers interdepartmental cooperation and the lack of capacity of intra-organizations has been a major constraint to a multilevel governance approach to effective delivery of adaptation measures in South Korea. The negative perceptual orientation towards NGOs or CSOs and stakeholders certainly plays a detrimental role in opening up the process of

policy decision making. Some of the interviewees have worried about local level adaptation plans as the follow up to the NCCAM. Similar but even worse than the situation at the national level, lack of capacity in local governments has been shown to be one of the biggest constraints in generating local climate change adaptation strategies. Owing to lack of capacity, local governments are claimed to be depending overmuch on central government, therefore local actors recognise climate change adaptation as one of central government's responsibilities and are comfortable with *the status quo* without any resistant feelings.

The findings of this research address challenges imposed by centrally controlled authorities which limit multilevel actors participating in adaptation governance. The political culture, the institutional culture and socio-cultural perceptions do not seem to encourage a participatory governance approach to climate change adaptation in South Korea. Excluding or restricting participation of various and valuable actors could result in the drawing up of impracticable and ineffective paper-documents lacking in tangible and practical adaptation strategies. The state-centric and bureaucratic culture in devising policies might result in speedy progress. However, this does not necessarily deliver the required results when it comes to the implementation of those policies. If the adaptation policies are made without consulting multiple actors at the local level and in the private sector, they may miss essential and practical knowledge and data. The policy makers in central government in South Korea tend to think that it is they that should take the lead in making adaptation policies. As climate change and the ways to adapt to it are diverse and complex, for the adaptation policies to be practical at the local level, local stakeholders should be involved and be encouraged to express their opinions. The state alone cannot solve complex and dynamic agenda (Eun 2011b), for instance risks posed by climate change. Climate change policy should be addressed by a variety of actors through multilevel participation. The implementation of adaptation to climate change becomes more effective when the cooperation of stakeholders and private actors is enlisted, especially at the local level, the situation could be different from that perceived by policy makers at central government.

Most interviewees have expressed concerns about the key policy agenda change after the presidential election in 2012¹⁰ that would take place along with a change of government. It is possible for new governments to pay less attention to climate change or green growth. In general, as a government changes, the key political agenda of government also changes. New government may choose climate change policies as being less important issue and reduce funds or resources for climate change projects and research in the organisation.

8.3. Discussion

This research has aimed at identifying the influences that have shaped climate change adaptation policies in South Korea, using as research methodologies an analysis of the contents of policy documents and a series of interviews with advisory members and key actors in climate change sector. I have sought to determine which have hampered or which have encouraged the decision-making about the national climate change adaptation measures.

Many adaptation scholars consider that a governance arrangement is more effective for achieving successful adaptation, in which multiple actors from multifaceted sectors participate in the decision making process and share information among themselves. As I have remarked in Chapter 2 of this thesis, I also support the governance approach - namely participatory governance, although some scholars have sceptical views regarding governance in the delivery of public service (Jessop 1998). As identified in the research, the general characteristic of the process of making national climate change adaptation policies is a state-led and top-down approach. The process has not been much different from the existing routine of policy making in South Korea. The challenges to the development of participatory governance for the delivery of adaptation policies arise from the political culture, the institutional culture and the weak capacity, as well as distrust towards stakeholders or NGOs. The general political culture of South Korea is characterized by a mixture of subject and participant culture in the context of Almond and Verba's cultures. As I found

¹⁰ The write-up for research has begun in 2012 before the election happens.

out from this research, the political culture of South Korea exhibits the characteristics of a subject rather than the participant culture, at least in the context of climate change adaptation. Under such a political culture, it cannot be simply a process of applying western-born governance in South Korea as if it were a participant cultural society. Taking into account of types of political culture, I have attempted to conceptualise three governance arrangements (refer to Chapter 2 and 3 in this thesis). The suggested governance types are examples that are applied to tackle issues associated with climate change adaptation in open and participant culture. There is a case study showing a parochial political culture (Finan and Nelson 2009); a type of governance suggested for governing environmental issues raised in a society where civil culture shows the characteristics of a mixture of subject and participant; and the case of a country where the state plays the important role but also admits the limitation of state-alone and built a web-based open platform for inviting private sector and sharing the experience of good practices with diverse actors. Thus governance will act as the lesser of two evils if it is properly incorporated into a society in accordance with culture and political structure.

South Korea is a country where the central government holds most of the power, making the decisions about policies; civil organisations are generally considered to be weak, lacking capacity and seeking their own benefits rather than collective goals. It is for these reasons that they are not invited to participate in the process of formulating policies. The shift of political culture to more participant orientations is not easy, because the owners of power want to keep their positions at the centre of decision making. As the private sector builds more capacity and a more participatory attitude towards climate change adaptation is adopted, the state needs to be more open with the public, providing information and greater access to the policy making process. And it should collaborate with private companies and civil organisations and receive information from local actors for the purpose of more effective policy implementation. When civil organisations and stakeholders build partnerships or networks for coping with climate change, the authorities generally play the role of resource provider and occasionally steer the delivery process of climate change adaptation policies if this is needed.

Unfortunately, the phrase of 'participatory governance' is not always regarded in a positive light in South Korea. During the presidency of the President Rho (from 2003 to 2008) the government adopted participatory policies and tried to include civil actors in the process of making policies. However it was argued that the inexperienced civil organisations did not play their roles as the representing public opinions (Jeong 2003). Owing to the negative image developed during that time, people, especially policy makers in central government view civil organisations a negatively. Hence some of scholars argue that it was too early for South Korea to practice participatory governance (Park 2010a). Other scholars argue that non-governmental organisations do not have sufficient capacity to participate adequately in policy decision-making (Kim and Kang 2004; Kim 2002b; Ra 2006). This has been identified as a barrier to effective delivery of adaptation measures in participant culture.

The Korean governance approach to climate change adaptation may be different from western governance. Unlike European countries, in South Korea the power distribution between central government and local government is less balanced, it is centred on the state (Oh 2005; Lee and Kim 2010). The networks for horizontal cooperation between local governments have not yet been formed properly (Shim 2002). In spite of these constraints, yet taking them into account, governance arrangement for successful climate change adaptation should be developed making due provision for its own social, institutional and political culture.

The aim of this research was to examine how South Korea responds to climate change adaptation; this was done by means of an empirical study. Taking into account the fact that the South Korean government has a top-down, state-led, and authoritarian political culture, I selected it as a case study, because it could show how climate change adaptation policies are initiated and formulated under a top-down political culture and what are the practical challenges resulting from this if it is to adopt governance modes in the decision making. Using the conceptual and methodological research frameworks outlined, and primary and secondary sources, I have sought to point a way forward towards a changing emphasis in the formulation of workable policies.

In conclusion, it is evident that the national climate change adaptation policies have been initiated and decided following the existing routine of a top-down approach in South Korea, although climate change adaptation is a rather novel policy agenda. Policy making for the national adaptation measures has been by the command of the central government. It seems, however, that there has been a significant body of opinion that holds negative views regarding the process of decision-making. The elitism of government officials and sectionalism among ministries appears to hamper a participant cultural approach to decision-making. The fact that the Lee government takes climate change as a key policy agenda item under the national paradigm of green growth and low carbon is claimed to be a positive driver of climate change adaptation in South Korea. However, agenda-setting by high level politicians is likely to be unstable or changeable responding to new government as they come with different policy agenda.

8.4. Contribution to the advance of knowledge

Before concluding my overall argument, I will demonstrate how this research can contribute to the advance of knowledge from the point of academic understanding of the political and cultural factors influencing climate change adaptation.

In general, my study has discussed the political cultural characteristics expressed in the governance approach to climate change adaptation, and has identified challenges observed in the process of decision making about national climate change adaptation policies. Very little literature has been written on social and cultural aspects in South Korea and across the globe, especially the political culture influencing the decision making about climate change adaptations. For example in South Korea, most literature about climate change adaptation published deals with physical, technical and engineering issues: collecting climate data, or methods to assess vulnerability, or the cost-effectiveness of building infrastructures to prevent flooding, or an examination of diversifying crop varieties etc. Since it is real that successful adaptation is determined by the influence of climate factors as much as socio-cultural and

political structures, my work will contribute to knowledge advances in understanding cultural aspects, particularly the political culture impacts on the governance of adaptation to climate change. This research has shown how strongly political culture influences the process of policy making, and under the political culture policy makers follow the policy routines even though a policy agenda is very new and complex. The research found out that the decision-making process about climate change adaptation has been influenced by the existing political culture which seems to hamper a participatory governance approach. This research reinforced the argument that political and cultural factors can limit a society in the way it tackles climate change adaptation. Traditional culture and social relationships restrict expressions of diverse opinions even in the case of professional and technical advice. A decision-making in climate change adaptation which neglects to consult diverse opinions and local interest groups can give rise to even social conflicts. Without considering local needs carefully, it is challenge for central government to understand the local conditions, for instance, the most vulnerable community to climate impacts and the way of distributing resources, and responsibility. Therefore it is recommended that government should provide opportunities for multiple actors to participate in the decision-making process and sharing responsibility through participatory governance.

In this study I have expressed my support for governance modes as a more proper approach to delivering climate change adaptation for it is likely to include more multilevel actors involving them in the decision-making. It is likely that the condition of people not exhibiting the characteristics of a participant political culture, or even not showing an interest in political objectives, might be used for adopting the top-down approach and exercising strong leadership by taking the key role in decision-making about climate change adaptation.

8.5. The Way forward

The aims and methodology of this study have been set out above. There are, however, some limitations to this research. These include: (1) the selection of interviewees was restricted. The majority of the interviewees were selected from

the group of experts who had been involved in creating the policies. Most of them have worked in government affiliated institutes or are government officials, even though some of them have worked in the private sector, they have been involved in government-funded research. The restricted spectrum of interviewees might have result in biased opinions regarding the role of stakeholders and civil organisations. (2) When I conducted this research local authorities had played a very minor role in matters concerning climate change adaptation. It was recognised when substantial policies are at the stage of delivery, the role of civil society organisations should play is a critical factor, and that therefore a governance approach may be an appropriate means of enhancing the effectiveness of the policies. (3) The imbalance of private and public interviewees could, in part, have magnified the bias in favour of strong government in making adaptation policies.

Although there are these limitations, my research is the first to conduct empirical research into climate change adaptation from the perspective of political culture and how it influences the governance approach in South Korea. This research may promote further theoretical and empirical research about culture's influence on climate change adaptation governance not only in South Korea but also in other countries across the globe. Through comparative analysis among different countries, we can understand more about relationships between political culture and effective governing of climate change adaptation by analysing different types of political culture in various regions. Therefore, the suggested further research can be: a study aims to examine the way cultures impinge on the process of adaptation policy making at local level by comparing that of national level; and a comparative research to analyse the governance of climate change adaptation among other political cultures.

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Appendices

Appendix 1. Consent Form

Geography

College of Life and Environmental Science

Basic Consent Form

Title: Research about experts' opinions regarding Climate change adaptation policies of South Korea

This research is carried out for my PhD thesis and supervised by Dr. Suraje Dessai and Dr. Clive Sabel and funded by the KOICA/WFK Scholarship. It aims to investigate what are experts' opinions about Korean adaptation policies in the context of climate change and examine how multilevel governance approach to adaptation policy is challenged. The interviews are mainly targeted to the members of advisory board for the National Climate Change Adaptation Measures 92011-2015).

This interview shall keep the ethics policy of University of Exeter (http://admin.exeter.ac.uk/ethics/ethics_policy.pdf), be anonymous. It will be used only for this research not for other purposes. There shall be no exposure of personal information to the third party. And also, in any time while this research is ongoing, you can withdraw your opinion from this research.

If you have any questions about this research, please contact me with email or phone; (kp277@exeter.ac.uk / keumjpark@hotmail.com) or (82-10-5232-9410/44-78-1057-5849).

Researcher: Keumjoo Park

Supervised by Dr. Suraje and Prof. Clive Sabel
Geography,
College of Life and Environmental Sciences
University of Exeter

Your signature below means that you voluntarily agree to participate in this research study.

Date:

Name :.....(signature)

Appendix 2. Interview guide

Climate change adaptation in South Korea

Researcher: Keumjoo Park
Supervised by Dr. Suraje Dessai
Dr. Clive Sabel

Geography, College of Life and Environmental Sciences
University of Exeter

Contact : kp277@exeter.ac.uk / keumjpark@hotmail.com
070-7533-9410 / 44-78-1057-5849/82-10-5232-9410

How are you?

At first, I really appreciate your attending this interview.

My name is Keumjoo Park. I am a PhD student of University of Exeter who is doing research about Korean climate change adaptation.

This research is carried out for my PhD thesis and supervised by Dr. Suraje Dessai and Dr. Clive Sabel and funded by the KOICA/WFK Scholarship. It aims to investigate what are experts' opinions about Korean adaptation policies in the context of climate change and examine how multilevel governance approach to adaptation policy is challenged.

This interview shall keep the ethics policy of University of Exeter (http://admin.exeter.ac.uk/ethics/ethics_policy.pdf), be anonymous. It will be used only for this research not for other purposes. There shall be no exposure of personal information to the third party. And also, in any time while this research is on going, you can withdraw your opinion from this research.

If you have any questions about this research, please contact me with email or phone; (kp277@exeter.ac.uk / keumjpark@hotmail.com) or (82-10-5232-9410/44-78-1057-5849).

Once again I thank you very much for your attending the interview.

Researcher : Keumjoo Park

University of Exeter

1. Express gratitude to interviewee
2. Ice breaking comments
3. Ask for signing the agreement form and permission to record the interview.
4. Explain briefly about the research

[Questions will be as follows but could change according to the situation]

- 1.1.** What was your role of making National Climate Change Adaptation Measures (NCCAM)?

[Ask more about the meetings for making NCCAM]

- 1.2.** Did you feel satisfied with NCCAM? (Do you think current NCCAM (at least in your field include all your concerns (advice)?

[Talking about the Contents of NCCAM generally and regarding the interviewee's field]

- 1.3.** What do you think about the "vision" of NCCAM?

- 1.4.** For successful implementation of the projects listed in NCCAM, what do you think should be built first?(what environment should be made for the successful implementation of the projects listed in NCCAM?)

- 1.5.** Most projects in current NCCAM(2011-2015) are related to build data basis and collect evidence for making the adaptation policy, [or I can ask about the contents of NCCAM]

- 1.6.** Are the plans /projects appropriate? (Reasonable time frame and the number of projects etc?)

- 1.7.** Then what do you think should be included for the next adaptation measures (2016-2020)?

- 1.8.** What approach or direction should the Korean adaptation policy pursue?

- 1.9.** For the desirable direction, do you think current adaptation policy is appropriate?

- 1.10.** If you think we should do something more for the Korean adaptation policy, then what could they be?

- 1.11.** What is successful adaptation in Korea, what state could be a well-adapted society in Korea?

- 1.12.** [As higher policy makers including the President Lee have interested in climate policy, therefore we (Korean) could get a certain progress in adaptation for the short period. (I do not say this sentence directly

but can ask about the opinions regarding governor's interest in climate change adaptation). Do you think this trend will continue for the next political regime?

- 1.13.** How much progress did we get in adaptation compared to other countries?
- 1.14.** Is there something better or lower in climate change adaptation in South Korea than other countries?
- 1.15.** What are the priorities in the Korean adaptation? What should be done first to adapt to climate change properly?
- 1.16.** Is there a way to solve or cope with the priorities?
- 1.17.** Compared to other environmental policy, do you think adaptation policy is responded well (or treated seriously by decision makers?)
- 1.18.** If there are constraints for implementing adaptation policy, what are they?
- 1.19.** And how could we reduce the constraints?

[local governments are making adaptation implementation plan]

- 1.20.** Ask about local adaptation plans: time frame, capacity, and constraints.

Thank you for your time and opinions once again.
Can I contact you later for more questions, if needed?

-The end-

Appendix 3. List of interviewees

Interviewee Number	Institution type	Sector	Gender	Interview Record(Y/N)
1	Government funded institute	General	Male	N
2	Governmental organisation	Meteorology	Female	Y
3	Governmental organisation	Agriculture	Male	Y
4	Governmental organisation	Disaster	Male	Y
5	University	Ocean/ Fishery	Male	Y
6	University	Industry/energy	Male	Y
7	Government-funded institution	Disaster	Male	Y
8	Government-funded institution	Agriculture	Male	Y
9	Governmental organisation	Forest	Male	Y
10	University	Forest	Male	Y
11	Government-funded institution	Ocean/Fishery	Male	Y
12	Government-funded institution	General	Female	Y
13	Governmental organisation	Meteorology	Female	Y
14	Government-funded institution	Ocean/Fishery	Male	Y
15	Government-funded institution	Water	Male	Y
16	Government-funded institution	Water	Male	Y
17	Governmental organisation	Water	Male	Y
18	Governmental	Ecosystem	Male	Y

	organisation			
19	Government-funded institution	Health	Female	N ¹¹
20	Government-funded institution	General	Female	Y
21	Governmental organisation	Ocean/Fishery	Male	Y
22	Governmental organisation	General	Male	N
23	Governmental organisation	General	Male	Y
24	Government-funded institution	General	Male	Y ¹²
25	Governmental organisation	Water	Male	N
26	Same person as No.24			
27	University	Water	Male	Y
28	Government-funded institution	General	Male	Y
29	University	Disaster	Male	N
30	Government-funded institution	Forest	Male	Y
31	Governmental organisation	Agriculture	Male	N
32	Government-funded institution	Ocean/Fishery	Male	Y
33	Same person as No.20			
34	Governmental organisation	Agriculture	Male	Y
35	Government-funded institution	Climate change prediction/monitoring	Male	Y
36	Governmental organisation	General	Male	Y ¹³
37	Same person as No.36			

¹¹ Electronic mail response

¹² Telephone Interview

¹³ Telephone Interview

38	Governmental organisation	General	Female	Y
39	Government-funded institution	Water	Female	Y
40	Government-funded institution	General	Male	Y
41	Government-funded institution	Ocean/Fishery	Male	Y