The smoking dragon

A study of how China frame their climate change policy

Johan Wahrby
Abstract

In the international climate change negotiations it has been hard to find a sustainable agreement about how to address the anthropogenic impacts on the climate. This is because the issue is very complicated and comprises many social and economic aspects. Because of the struggling in the international negotiations is it necessary to analyze how the climate change issue is understood in different regions and countries of the world. The purpose of this thesis is to analyse how actors within the climate policy sphere in China frame the climate change issue. In the near future, China will become the world’s largest emitter of carbon dioxide and with a population of 1.3 billion people; China is one of the key countries in the international climate negotiations. The thesis analyses how two key actor groups - decision makers and scientists connected to the Chinese climate change administration - frame the climate change issue in semi-structured interviews. The respondents frame the climate change issue as a large obstacle for a future Chinese development, both economically and socially. To address climate change in China the respondents think that technology innovations and transfer of technology from the developed countries will be very important. Therefore the respondents think it is vitally important to continue with the international climate negotiations in the future.

Key words: Climate change, China, developing country, international negotiation, environmental problem
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# List of Abbreviations and Acronyms

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<th>Description</th>
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<tbody>
<tr>
<td>APP</td>
<td>Asian Pacific Partnership</td>
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<td>EU</td>
<td>European Union</td>
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<td>CDM</td>
<td>Clean Development Mechanism</td>
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<td>COP</td>
<td>Conference of the Parties (to the UNFCCC)</td>
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<td>G77</td>
<td>Group of 77</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GEF</td>
<td>Global Environmental Facility</td>
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<td>GHG</td>
<td>Greenhouse Gas</td>
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<td>ICSU</td>
<td>International Council of Scientific Unions</td>
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<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
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<td>KP</td>
<td>Kyoto Protocol</td>
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<td>UN</td>
<td>Untied Nations</td>
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<td>UNEP</td>
<td>United Nations Environment Programme</td>
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<td>UNFCCC</td>
<td>Untied Nations Framework Convention on Climate Change</td>
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<td>WMO</td>
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1. Introduction

In the beginning of year 1960 policy makers started to understand that environmental problems are border crossing issues and that it necessitates international agreements (Birnie and Boule, 2002). In 1972 the first international environmental conference was arranged in Stockholm, Sweden by the United Nations (UN) (Bernes, 2001). In year 1992, twenty years after the Stockholm conference the United Nations second international environmental conference was arranged in Rio de Janeiro, Brazil. The conference did not only focus on environmental issues, also social and economic issues were conducted in the discussions to reach a sustainable development (Bernes, 2001). Another milestone in the international environmental cooperation was in 2002 in Johannesburg, South Africa (Seyfang, 2002). Many environmental issues have been solved through international negotiations but there are still unsolved problems and one of those issues is the human impact on the climate change. It has proved difficult to reach an agreement over the climate change issue, this is because the issue is a very complicated problem and comprises many social and economic aspects. Still it is important to solve the problem internationally because the climate change is both a national and global issue (Keppo, 2006).

It is important that both industrialised and industrialising countries work together to reduce the threat of climate change (Desai, 1998). So far the climate change negotiations have tended to be focussed from the northern world’s perspective, which has led to a conflict between northern and the southern countries (Najam et al, 2003). During the negotiations northern countries, have taken a leading role. This is despite the fact that developing countries are predicted to be the most affected by climate change (Desai, 1998), and often developing countries are more vulnerable to climatic hazards than northern countries (Downing et al., 2003). Developing countries accuse northern countries of focusing too much on the mitigation of green-house gases whilst northern countries criticise southern countries for not undertaking commitments during the climate negotiations of the Kyoto protocol (Ipsen, 1999). There are agreements about commitments, but they do not include binding targets for all countries.

To gain more influence during international negotiations, developing countries have joined together in a coalition called the G77 group. China is not a member of the G77, but they have had a leading role during negotiations and they still count themselves as a developing country. China is one of the world’s fastest growing countries, both economically and from a population perspective (Ipsen, 1999). Rapidly increasing energy consumption is one of the most important factors that have contributed to China’s growing economy, but there are still big gaps in China between the rich and poor (Nordqvist, 2004). Without coal energy, China would not be as strong as it is today (Zhang, 2000a). Because of China’s fast development, it has been predicted that China will pass the US emission of carbon dioxide and become the largest green house gas (GHG) emitting country by 2010-2012 (Ipsen, 1999). Even though China is responsible for a considerable amount of GHG emissions it has had a leading role in negotiations, and has also been quick to ratify both the UNFCCC and the Kyoto protocol (Ramakrishna, 2003).

Because of the difficulties in the international negotiations, how the climate change issue is understood in different regions and countries of the world is very important. Because of the Chinese fast economic development and increasing amount of GHG emissions in recent years it is extra important to achieve an understanding and dialog between China and the rest of world regarding climate change. Also add that China has reformed their foreign policy in the last 20 years and are today an important actor on the international arena and have a large influence on geographic surrounding countries and other developing countries (Zhao, 2001).
1.1 Aim
To be able to find a solution on the climate change issue, it is important to increase the knowledge about how actors in the international negotiations frame the climate issue. Since there are conflicts during the negotiations, the purpose of this thesis is to analyse how two key actors within the climate policy sphere in China – decision makers and scientists connected to the Chinese climate change administration - frame the climate change issue. Consequently, the thesis will contribute to a more informed understanding of how climate issues are understood in China, and if China is affecting the international climate negotiations.

Central questions in the study are:

- What are the goals for China within the sphere of international climate co-operation?
- Which issues do the two key actors consider should take priority on the international climate change agenda?
- Which factors do the two key actors consider to be behind the conflicts between industrial and developing countries in climate change negotiations?

1.2. Disposition
The introduction and the aim of the thesis is followed by a background chapter covering what climate change means, a historical background of the international climate negotiations, conflicts in the international negotiations. Subsequently, the methods and theories used presented in chapters 3 and 4, containing a detailed description of the document and the interview method used and what the concept of ideology means. The concept of ideology is later used as a theory to analyse the interview material. Next, follows a presentation of the results from the text and the interview analyses and a discussion chapter that compares the interview and the text analyses results and a discussion the reasons for the respondents’ framings of climate change. Finally the conclusions of this thesis are presented.

2. Background - Climate change as a global issue
During the UN Conference on the Human Environment in Stockholm, 1972, the climate question was on the agenda for the first time. The question was discussed and it was decided that more scientific research was needed (Linnér and Jacob, 2005). After the Stockholm conference several meetings were conducted with focus on the climate change, both politically and scientifically. In 1988, the first international meeting concerning climate change was held in Canada “Toronto conference on the changing atmosphere”. At the meeting scientists and politicians represented 48 countries and the results of the meeting were the Intergovernmental panel on climate change (McCarthy, 2001). The purpose with the panel was to produce independent scientific research. In 1990 the IPCC introduced their first assessment report about climate change.

The report resulted in United Nations Framework Convention on Climate Change (UNFCCC) in Rio de Janeiro, 1992 (UNFCCC, 2004). The negotiations for the UNFCCC in 1992 became difficult and complicated, because a lot of nations wanted to make their standpoints clear during the negotiations. The negotiation ended in a compromise between 154 different nations, but by the year of 2004 189 countries had signed the convention. The climate change issue became very complex during the negotiations, because the issue included both economic and social interests. (UNFCCC, 2004).
As a result of the negotiations, all countries including the developing countries are divided in four groups with different commitments and to the convention with different obligations. China belongs to a group which doesn’t have any binding commitments. According to the convention, the Annex I countries will be the first to cut their emissions and help the rest of the developing countries with technological and economical support (Zhang, 2000a).

The second assessment report from IPCC served as a scientific base for the negotiations which ended in the Kyoto protocol at COP 3 in Kyoto 1997 (UNFCCC, 2005). The main purpose of the Kyoto protocol was that the Annex I countries should reduce their green house gas emissions to 5% below the 1990 level until 2012 (UNFCCC, 2005). To reduce the GHG emissions, the Kyoto protocol mainly includes three mechanisms: emission trading, joint implementation and the clean developing mechanism (CDM). Emission trading means that the private sector in each country has a maximum quota of greenhouse gas emissions. If a company needs to emit more carbon dioxide than their maximum, the company has a possibility to buy emissions from a company which is not using their total amount (UNFCCC, 2005). The Kyoto mechanism joint implementation implies that a company in an Annex I country is able to do a GHG reducing project in another Annex I country. The CDM project means that a company in an Annex I country makes investments in a Non Annex country. The investments should be to help the Non Annex countries through environmental friendly technology, sustainable development and reducing greenhouse gases. Through the CDM project the Annex I countries are able to emit more GHG (UNFCCC, 2005). According to article 25 in the Kyoto protocol, the protocol needs to include 55 percent of the world’s total carbon dioxide emissions to enter in force (UNFCCC, 1997).

Since the Kyoto protocol the negotiations of the COP meetings have focused on implementation of the Kyoto protocol and the mechanisms to make it possible to ratify the protocol. The scientific base for the negotiations has been the IPCC Third Assessment Report (2001). The negotiations have at several times been close to break down, not least when USA left the negotiation table in 2001. At the COP seven in Marrakech, the parties finally reached an agreement about the technical details of the emission commitments. In 2004 Russia ratified the Kyoto Protocol and finally in 2005 the Kyoto Protocol entered in force (ENB, 2005). To assist the developing countries with climate change related problems two funds have been established. The first fund, the Global Environment Facility (GEF) was already established in 1991 by the Untied Nations. The Global Environment Facility is not only supporting climate change oriented projects but also other projects regarding biodiversity and international water. The GEF fund is management by the United Nations and the World Bank (GEF, 2006). In order to help the developing countries to adapt to a climate change the other fund, the Adaptation Fund, was establish at the COP 6 meeting in Bonn. The purpose of the fund is to help countries to finance capacity building and technology transfer to adapt to a climate change (Huq, 2002).

The international negotiations took an unexpected turn in 2005, when China joined the US, Australia, Japan, South Korea and India in the discussion forum called the Asian Pacific partnership for clean development and climate change (APP). The purpose of the discussion forum is to bring energy and environmental issues to the fore, and to exchange climate change technology. So far it is not possible to see any concrete outcomes from the APP agreements (Stern, 2006).
There are disagreements in the international climate change negotiations. According to article 3.9 in the Kyoto protocol further commitments for Annex I countries should be discussed, at least seven years before the Kyoto time period ends, which means in 2005 (UNFCCC, 1997).

At the first COP/MOP (members of the Kyoto protocol) meeting in Montréal, Canada in 2005, further commitment issues were raised. The parties disagreed with each other and they decided that an ad hoc group was needed to consider further commitments beyond the post Kyoto limit 2012 (ENB, 2005). At the COP/MOP two in 2006 the developing countries declared that they will not agree to any commitments until the developed countries demonstrated that they are prepared to address climate change seriously (ENB, 2006). The Fourth IPPC Assessment Report concludes that humans have an impact on the climate which is contributing to a temperature rise (IPCC, 2007). This makes it even more important to reach a sustainable agreement on how to handle the climate change. To be able to do that it is important to understand different countries standpoints and needs. It is especially important to understand key countries as China which has a large influence in the international negotiations.

3. Theory

3.1 How climate change has been addressed in China

The leadership in China is aware of the problem and that the anthropogenic influence on the climate is threatening the Chinese development (Nordqvist, 2005). China have established a group, “the National Coordination Committee on Climate Change”, to coordinate the conventions implementation in the country. The purpose of the group is to coordinate China’s climate change policy. So far five projects have been done in China in order to implement the convention in the following sectors: energy, agriculture, forestry, municipal sectors, and industrial processes (Ramakrishna, 2003).

There is a need to spread the climate change issue to more distant authorities and especially further down in the Chinese governmental organisation (Nordqvist, 2005). This can be a result of the Confucianism which has been dominating the Chinese society. The Confucianism doctrines advocate that the society should be political hierarchy constructed (Lodén, 2007; Naess, 1967) and the Marxism (Maoism) wanted to centralise the political power to the collective (Månson, 1998; Liedman, 2005). The problem is that the climate oriented centres are mainly concentrated to Beijing and has limited numbers of people working with the issues. Still the Chinese climate policy sphere is politically centralized and people outside the sphere are not aware of Chinese climate policy (Nordqvist, 2005). The Chinese environmental protection agency is situated in Beijing and has only 300 employees to control the whole country (Pettersson, 2007).

3.2 Impact of a climate change in China

Climate change is threatening food production in the Asian countries and the Chinese government is already struggling with food production (McCarthy, 2001; Jiang, 2000). Assessment has revealed that further climate changes will probably cause a higher temperature, drought, flood and soil degradation which will have a negative impact on agriculture in the Asian countries. The climate change is not only threatening the agricultural industries, it is also threatening the fish industry. Temperature changes in the water have stressed the marine ecosystems so that fish recovery is reduced (McCarthy, 2001).

The implication of climate change on food and agriculture is very important for China. There is already a conflict between the Chinese society demands for food and other interests, such as
land and water use without a climate change. This means that a climate change will increase the conflict. Conclusions made through modelling shows that Chinese agriculture will be even more vulnerable to a climate change in the future (Smit and Yunlong, 1996; Jianfa, 1998). As a result of a future temperature rise, glaciers will melt, which today are providing the Chinese people with water. This will even cause a larger conflict between economic development and the agriculture sector (Zhong Su et al, 2007; Chiarle et al, 2006).

In May 2006 the population of China exceeded 1.3 billion people (CPDRC, 2006), which is greater than 1/5 of the world’s population (Nordqvist, 2005). There is a clear conflict between the size of population, development of the economy, society, use of recourses and environmental issues. China has traditionally been an agricultural economy, but today more and more people are moving to the cities along the west coast. Because of the large urbanization, China is confronting real problems, a smaller amount of people working in the agriculture sector has to feed a bigger population living in the urban areas (White paper, 1996). The rapid urbanization is demanding a larger use of natural recourses, urban land, housing employment and education (Shen, 1998).

Before the 1980’s the Chinese economy had been based on agriculture (Van Vuuren et al, 2001). The reason why the problems are visible in China has it’s origin from the combination of rapid economic development and at the same time economic reforms without clear guidelines. During the open door reform the Chinese government tried to introduce the market system. It is a lack of effective institutional framework to regulate or guide the market development. Without an institutional system, the market had a tendency to work for its own winning, which has resulted in problems (Wong, 2005). Since introducing the open-door policy in late 1978, the Chinese economic growth has increased like wildfire (Zhang, 2000b). Between year 1970 to year 1997 China’s GDP has grown by 9.7% per year (Zhang, 2003). The Chinese economy has been the most rapidly expanding economy during the last 17 years and today China has become a lower middle-income economy, with a per-capita GNP of US$1500 (Nordqvist, 2005). But the economic growth has caused serious environmental problems in China (Kejun et al, 2005). It will take a long time until a balance is reached between the three pillars even if the Chinese government has taken steps in the right directions (Liu et al, 2004).

3.3 The Chinese awareness of a climate change

Common Chinese is not aware of climate change (Nordqvist, 2005). The Chinese government acknowledges this lack of awareness and therefore the next climate change related project should be to improve the communication in China (Ramakrishna, 2003). A public understanding of the climate change issue creates a political possibility to address climate change (Stern, 2006). Because of the lack of awareness of a climate change in the Chinese society it is very important to focus on information (Liu et al, 2004).

It is important that the Chinese government influences local governments to support renewable energy projects to combine development of economy with an environmental development (Xiaohua and Zhenmin 2003). If the Chinese government will inform of and promote sustainable energy consumption it will be possible for China to continue their economic development (Weidou and Johansson, 2004).

3.4 Climate change as an energy issue in China

The reason for that is that the Chinese economy and income growth is historically connected to the Chinese energy consumption (Wei, et al 2006; Nordqvist, 2004; Martinot, 1997). The
energy from coal production has been the main contributing factor to the Chinese economy expansion. The Chinese economic development has increased the energy consumption from 571.4 million ton of coal in 1978 to 1440 million ton of coal in 1997. This makes China the world’s leading producer and consumer of coal. In the year of 1999, 75 percent of the Chinese total energy consumption was related to coal as energy resource (Zhang, 2000a). The use of coal as energy resource has of course caused a lot of serious environmental problems and health problem such as air pollution, crop damage and acid rain in China. In the end the environmental problems will affect the Chinese society and economy (Wang 2003). However the increasing energy consumption has also caused huge environmental problems through energy exploitation in China (Zhang, 2000a), for example coal mining projects (Desai, 1998).

The immense Chinese use of coal as energy resource has not only contributed to air pollutions; it has also contributed to a big amount of carbon dioxide emissions. The increasing use of fossil fuel as energy recourse has increased the Chinese emissions of carbon dioxide (Wei et al, 2006; Lin, 1998; Streets, 2001). From 1980 the carbon dioxide emission from fossil fuels has increased from 358.60 million tons per year to 3540.97 million tons in 2003 with an average of 5.2 percent CO₂ increased emissions per year (Zhang, 2000a). China ranks today as the world’s second largest emitter of CO₂ (IAEA, 2006), but a future prospects from the World Bank predicts that China will pass the US within a five years period up to 2012 (Zhang, 2000a; Bach and Fiebig, 1997). China is estimated to have 12.7 % of the world’s total global carbon dioxide emissions (IAEA, 2006) and scientists have predicted that China will triple their energy consumption within a 20 year period (Sweet and Hood, 1999). Still the use of coal and the emissions of carbon dioxide are not much per capita, compared with the northern world. China was emitting 2.72 tons CO₂ per capita in 2003 which is only half of the worlds average (Zhang, 2000a) and the US has an average of 19.95 tons CO₂ carbon emissions per capita (IAEA, 2006). The explanation of why China has such a low carbon dioxide emission per capita is the economic gap between rich and poor people living in China (Zhang, 2000a). The Chinese has implemented around 30 energy laws to reduce energy consumption since 1980. The laws concern administration, laws, economy and technology to increase production of energy saving technology (Zhang, 2000a). Between 2005 and 2010 China has a target to reduce the energy intensity with 20 percent per GDP (Stern, 2006).

3.5 The importance of new technology to address climate change
The Chinese government has implement laws to increase production of energy saving technology (Zhang, 2000a). Development of new technology is one of the most prioritized areas in Chinese politics, because it is symbolically important to prove technology and scientific research development. (Nordqvist, 2005)

During the pre-negotiations for the Kyoto protocol the Chinese delegation was very sceptical to the CDM, but during the negotiations after Kyoto, the Chinese attitude to the CDM mechanism has become more positive: During the COP six meeting the Chinese spokesman called the CDM a ‘win-win’ mechanism (Bjorkum, 2005). As a response to the international negotiations, China has created a new institution to handle the implementation of CDM projects (Bjorkum, 2005). Due to studies made by Vrolijk and Jince (2005) China has a large potential to reduce their emissions of green house gases through CDM projects. From the ratification of the Kyoto protocol it has taken quite a long time to start with the first CDM projects in the world, but the first one was regressed in China in 2005. During the last year, the CDM projects have increased rapidly. Many of the CDM projects in China are based in the coal mining industries to reduce emissions. There are also projects related to renewable energy, landfill gas, and methane projects (Vrolijk and Jince, 2005). There are still high
transition-costs for CDM projects and implementing a project can be compared with when a company starts a new production in China (Tvibane, 2007)

Still the implementation of the CDM mechanism has had a few difficulties to overcome. First there is a lack of knowledge to implement CDM project locally. It is also hard to collect data to prove the effectiveness of the projects to reduce social unfairness, sustainable development and reduction of GHG emissions. There have also been some cultural problems in implementing the CDM mechanism. Mostly the problems have been similar with problems which upper when western companies try to enter the Chinese market (Vrolijk and Jince, 2005; Zhang, 2004). Even if there are local obstacles for implementation of CDM projects, it seems that the CDM mechanism is valuable for China. Through the CDM the Chinese government hopes to progress sustainable development and reduce social differences in the Chinese society (Vrolijk and Jince, 2005; Vennemo et al, 2006).

Only through a development of science and technology the energy intensity can be reduced (Wei et al, 2006). To reduce the amount of coal in the Chinese energy production sector the following different energy possibilities have been studied: oil, natural gas, large and small-scale hydro, nuclear, wind, biomass, solar and other renewable sources of energy (Weidou et al 2004).

It is important from the Chinese government perspective to make a clear CDM policy, institutional settings and an implementation strategy to encourage investors to develop CDM projects in China to reduce the transaction cost for projects (Zhang, 2005a; Jiahua, 2002; Tangen, 2003).

3.6 Economic support and long term investment to address climate change

The Chinese work is from many perspectives depending on external financing such as the global environmental facility (GEF) and CDM projects (Zhang, 2000b). For an example the Chinese communication plan was funded by global environmental facility (Bjorkum, 2005). But studies show that several problems have appeared during the application process and delayed projects (Heggeland et al, 2005).

3.7 China in the international climate negotiations

China joined the international climate negotiations for the first time at the end of the 1980 (Ramakrishna, 2003). Since the pre-negotiation for the UNFCCC China has had an active role during the international climate negotiations. China signed the UNFCCC in 1992 and was one of the first countries to ratify the convention in 1993 (Ramakrishna, 2003). The active role during the beginning of 1990 forced China to form its own climate policy. Due to China’s commitments under UNFCCC, China presented their national communication on climate changes at the COP ten in Brazil in 2004. The national communication includes an inventory of GHG’s based on data from year 1994 (National communication, 2004). When China initiated their national communication on climate change, they fulfilled their only commitment under UNFCCC (UNFCCC, 1992). The fulfilment of their national communication plan can be seen as China taking their commitments and the international climate negotiations seriously (Nordqvist, 2005).

Five years after that the Kyoto protocol had been adapted, the People’s Republic of China declared that they had ratified the Kyoto protocol, at the international environmental conference in Johannesburg (Vrolijk and Jince, 2005). China was not only active during the UNFCCC negotiations; they were also active during the Kyoto protocol negotiations.
(Ramakrishna, 2003). The Chinese adjustments to international climate negotiation can so far be described as conservative, defensive, uncooperative and unconstructive (Economy, 1993). Characterizations for the Chinese negotiation are that the Chinese want to generalize the context of the negotiation issue (Pye, 1992).

3.8 The Chinese expectations of the international climate negotiations

The negotiations for the UNFCCC document were not a large triumph from the developing countries perspective, but they succeeded to compromise sustainable development in the text (Najam et al, 2003). In the international negotiations the developing countries has focused on two issues. The first one is the inter- and intra-generational principle for the responsibility of GHG emissions. The principle means that the responsibilities for the effects that can be seen today are caused by earlier GHG emissions. During the negotiation of UNFCCC, the Non-annex I parties wanted to focus on historical responsibility for GHG emissions rather than reducing present emissions. The second standpoint is the Non-annex countries focus on sustainable development that also was obvious since the UNFCCC and has not been in focus during the Kyoto negotiations (Najam et al, 2003).

The standpoints of the developing countries are that the northern states have the responsibility for the human impact on climate change today. Since the 20th century the northern countries have reached their welfare through fossil fuel burning and carbon emissions. If the developing countries are going to adapt to a climate change it is necessary with: good development planning, institutions, governance, economic management and technology (Downing et al., 2003).

Stern (2006) argues that governments can encourage international cooperation to overcome barriers for transfer of technology. There has been some progress to improve the technology transfer and at the 9th COP meeting an expert group on technology transfer was established (Schipper et al, 2005).

3.9 Future international climate negotiations

Already in 1992 China declared that they would be seen as a developing country, with attendant advantage and duties to the international community in the international climate negotiations. The government in China has full awareness of which rights and duties they have against the convention (Ramakrishna, 2003). Negative voices accuse China of focussing on their own national sovereignty (Hatch, 2003). During the Kyoto negotiations and subsequent COP meetings China have refused to discuss voluntary commitments referring to the fact that China still counts as a developing country (Bang et al, 2005). China are justifying their arguments to make no further commitments with the lack of historical responsibility for climate change, low emissions per capita compared with developed countries, and lack of financial and technology recourses for reducing their GHG emissions (Bjorkum, 2005). The Chinese negotiation delegation has successfully avoided further commitments on the international climate agenda (Bjorkum, 2005). The Chinese standpoint is that commitments can’t be accepted until developed countries take their responsibility and China has reached the average economic standard (GDP per person) of a developed country (Haugwitz, 2002). But Buchner and Carror (2005) argue that the developing countries will only suffer a small economic loss compared with social and environmental winnings. Other authors argue that it is not possible for big developing countries such as China to accept commitments, because it would prevent development (Sugiyama and Deshun, 2004; Zhang, 2000b).
Within the international negotiations the developing countries declared that the climate change should be addressed within the frames of a suitable development (Sugiyama and Deshun, 2004). It seems as if the developing countries want to focus on per-capita emissions while the industrialized countries prefer to focus on current and future total national emissions (Kluwer, 1998). They also wanted to build a link between sustainable development and climate change, rather than only focusing on mitigation goals. The developing countries wanted to focus on both climate change and sustainable development, which would include all three pillars: social, economic and ecological development (Downing et al, 2003).

Birnie and Boyle (2002) argue that soft laws allow countries to agree to obligations that they would not have done otherwise, because a non binding law includes good faith and can influence future policy making in different countries. Studies show that China would be able to agree to commitments if they are implemented step by step in a longer time perspective (Zhou, 2006). If the developing countries are going to agree to commitments, the commitments have to be individually adjusted for each developing country (Zhang, 2005b). At the same time a tremendous political will from the developed countries is needed to persuade the developing countries to agree to commitments (Hermann, 2002). As long as the international climate negotiation is not taking the seeking of a fair outcome to address the climate change seriously, the negotiation will be inhibited (Leigh, 2004).

4. Method

The purpose of this thesis is to analyse how actors within the climate policy sphere in China frame the climate change issue. The analysis was done in two steps. The first step was to conduct a document analysis of the G77 and China’s proposals during the negotiations at the meetings of the conference of the parties. The purpose was to gain knowledge of their standpoints. The study was used as a basis for the construction of relevant interview questions for the second analysis, which was the interview research. The second step was therefore to interview people with connections to the Chinese climate policy sphere. The objective of these interviews was to gain a deeper knowledge of how actors within the climate policy sphere in China frame the climate change issue. The document analysis was an important step to improve pre-knowledge and be able to ask relevant interview questions. According to the hermeneutic theory of science it is important to have good background knowledge to be able to conduct successful science (Hellspong and Ledin, 1997). The basis of this theory is the hermeneutic circle, which states that the scientist starts with an existing knowledge and through the course of the research increases his or her knowledge. After the scientist has completed an experiment, he or she has gained further pre-knowledge and is able to commence a new research issue (Alvesson and Sköldberg, 1994). The text analysis can be seen as the first stage in the hermeneutic circle. To analyse the documents and the interviews I have used the idea analyse as a tool.

4.1 Idea analysis

In order to analyse political documents and the interviews I have chosen an idea analysis method. The idea analysis is an umbrella term for combinations of purposes, problems and analysis of political texts. The methods depend on what the scientist is studying rather than how the scientist examines the material (Beckman, 2005). To sum up, the idea analysis means that you study a document to see which ideas are promoted. When using this method the material that has been examined becomes more ordered, with the key themes and issues clearly evident (Bergström and Boréus, 2005). When an idea analysis is used it is possible to have three different purposes: to describe the context of the text, to explain the message of the
text and to make an interpretation of the studied material. It is also possible for the scientist to combine these three purposes as he or she wants (Beckman, 2005).

The word ideology has been used in the philosophical debate since the 18th century. The word has a broad definition; depending on what circumstances the word has been used in (Linnér, 2003). There is no single definition of the ideology and the word is defined differently by different people. An example of definitions according to Eagleton (2000) is “the process of meanings, signs and values in social life” or “a body of ideas characterises of a particular social group or class”.

In this study the concept of ideology has been defined according to Linnér (2003) definition. The ideology can be defined as a forum of people’s ideas, motivations, aims, means of social actions and especially political actions. In the term of social conflicts different ideologies are occurring. The ideology can be used to legitimate a groups acting. To be able to make the concept of ideology to a useful analytical tool it is important to make a more exactly definition of term. The term ideology in this case is defined in three analytical parts: description of reality, valuations of goals and recommendation of actions. Description of reality illustrates the direct understanding of the situation of the world. Valuations mean how it should be. Recommendation of actions describes how the valuations should be reached. Those analytical parts are mainly used to be able to identify a central idea in a group and it is not focusing on the evolutions of ideas (Linnér, 2003).

4.2 Document analysis

In today’s society we have the opportunity to communicate with people on the other side of the world. This communication is forming new and different discourses within society. The basis for the communication is talking and writing. Often decisions in society are described by different texts or documents, and an important method in social science is to analyse these. The purpose of analysing texts and documents is to critically question society from different aspects and dimensions (Bergström and Boréus, 2005). To be able to analyse a text it is important to consider the purpose of the text. A text analysis is a procedure to gain and then be able to handle the relevant information material. It is important to use a systematic analysis to be able to critically examine the text (Beckman, 2005). An important step in the international negotiations is to agree about political documents such as conventions, protocols and plans of action. From that stage in the international negotiations agreements should be followed as agreed by the respective party. During the negotiations all parties are trying to reach a consensus about details in the final document. Before and during the negotiations different parties are able to express their view and give proposals concerning the context of the final document. In the context of climate negotiations each party or union has the possibility to hand in proposals to the secretariat.

The purpose of the text analysis was to gain information about what areas the group of G77 and China has been giving priority to in their proposals to the United Nations framework convention of climate change. The reason I have chosen to analyse the proposals from both G77 and China is because they almost invariably stand behind the same proposals. This increases the significance of interviews with the Chinese policy makers, as they will help to determine China’s individual standpoint. The proposals to the UNFCCC are political documents submitted in order to express a political message during international climate negotiations. The proposals from G77 and China that I have analysed are accessible from the United Nations Framework Convention on climate change database, held on their homepage (UNFCCC, 2006). I have conducted an extended research (2006-04-02) of their database for
group of G77 and China”. I found 62 documents but only 38 of the documents I consider relevant to the study (see the documents that have been analysed in the Appendix one). The rest of the documents were not relevant, because they did not contain any proposals for the conference of the parties. To analyse the documents, I used the term of ideology’s three analytical parts: description of reality, valuations of goals and recommendation of actions.

4.3 Qualitative semi-structured interviews

As the primary method of the thesis I have chosen to use interviews to gain knowledge about how actors within the climate policy sphere in China frame the climate change issue. Depending on purpose and which problems the scientist wants to solve, different types of methods can be used (Lantz, 1993).

Because of the aim and the delimitations of the thesis I have chosen to use interviews as the primary method of enquiry. A qualitative interview needs less scientific material than a quantitative method. A quantitative method needs a larger amount of data to be able to make statistical conclusions (Svenning, 2000). Another reason way I have chosen to conduct interviews is to be able to ask attendant questions. If I had used an enquiry study instead of an interview method I would not have been able to ask specific questions. Further text analyses would not be possible because there are no documents describing the Chinese thoughts during the international negotiations. A big advantage of using interviews is the flexibility of asking questions compared with using a strict enquiry study (Bell, 2000).

There are some critics of the interview as a scientific method. The most common criticism is that the interview method is not objective. This criticism has its origin from the fundamental theory of science and what science is. There is no possible way that an interview is fully objective, but the interviewer should use a common method in order to increase the objectivity of the interview analysis (Lantz, 1993). My view of objectivity is that there is no objectivity in any scientific method. It doesn’t matter what kind of method the scientist is using the results will not be entirely objective. The scientist can of course try to be as objective as possible but in the end there is no total objectivity.

4.3.1 Interview preparation

Because of the purpose of the thesis I have focused my questions on how the Peoples Republic of China frames their climate change policy internationally. The basis of the questions (see appendix two) is drawn from the document analysis and pre-knowledge gained from reports, books and scientific articles. To be able to carry through an interview you need to be well prepared. It is also very important that the interviewer is updated on the subject that he or she is asking questions about (Lantz, 1993). Before the interview is it important to construct an interview guide. To be well prepared a questionnaire consisting of eleven questions was constructed. The questionnaire also included thought about what I wanted to gain from the interviews. The questionnaire starts with a question related to what the respondent was working with and for what intuition the respondent is working for. The first five questions are related to the Chinese national climate change policy. From question six to eleven, the questions are related to the Chinese international climate change policy. Beneath each question suggestions of follow up questions were written to be enable a follow up of unclear answers. Also beneath each question thoughts of what information I hoped to gain from each question was noted. The interview questions are included in the appendix two at the end of the report.
4.3.2 Interview execution
Each respondent was selected for their connection or their institution’s connections to the Chinese climate change policy. Each respondent either has been or is connected to the Chinese climate change negotiation delegation as scientist or negotiator. Some of the respondents were also selected for their work in other climate change forums such as the IPCC, Europe-Asia forum or the Asian-Pacific partnership for clean development and climate.

Eleven interviews were carried through at nine different institutions connected to the Chinese climate policy in Beijing, China. Respondents from following intuitions and departments were interviewed: Institute of environmental and suitable development in agriculture, The national climate centre at the China metrological administrations, School of environmental and natural resources at Renmin university of China, Department of treaty and law ministry of foreign affairs, National development and reform commission, laboratory for climate change studies of China metrological administrations national climate centre, School of geography at Beijing normal university, Institutions of nuclear and new energy technology at Tsinghua university, Energy system analysis and market analysis division at the energy research institute at the national development and reform commission, and the CDM working unit at China state environmental protection administration.

To avoid misunderstandings during the interviews it is important to describe the frames of the interviews for the respondents (Lantz, 1993). Before the interviews I presented myself and what the interview material was going to be used for. The eleven over riding interview questions was also distributed before the interview. This was done in order to let the respondents think and prepare the answers of the questions. It can be dangerous to hand out the interview questions before the interview, because the respondent has the possibility to rethink and value his or her answers. But on the other hand the respondents have the possibility to give more differenced answers.

According to postmodernism no language can tell an absolute truth (Patton, 2002). The interviews were conducted in a language other than that which the interviewer and the respondent speak as their first language. It is important to consider the interview method as a conversation between two human beings to gain knowledge (Lantz, 1993). It is also important for the interviewer to remember that there could be a language barrier during the interviews in order to help minimise misunderstandings. Normally it is usual for foreign scientists to use an interpreter during the interviews in China. But because of the respondent’s involvement in international cooperation’s I made the decision that it was unnecessary to employ an interpreter. I think it has both negative and positive effects not to use an interpreter. The negative part is that it is easier for the respondent to express themselves if they are answering the interview question in their mother language. The positive part is that you get a better contact between the interviewer and the respondent if they talk direct to each other. Another positive thing is that you get clearer answers when a respondent answers in their second language. It is harder for the respondent to avoid answering a question in a dialog in another language. Another positive argument to not involve a third person is that some of the information will get lost in the conversation. The interpreter can translate the respondents answer incorrectly, and the interpreter can also misunderstand the question from the interviewer.

Before an interview takes place is it important to consider some interview ethics. It is important to start and end the interview by stating the purpose of the interview and what the
interview will be used for (Kvale, 1997). This is an important step to establish trust with the respondents. I also informed the respondents that the interview was totally on a voluntary basis and that the respondent was free to leave whenever he or she wanted. Because I wanted to tape-record the interview I asked the respondents permission beforehand. I also asked the respondents after if everything was acceptable with the interview. I have also decided to keep the respondents anonymous but I will mention which institution they are working at. I also informed the respondents that I intended to transcribe the interview material.

4.3.3 Interview analysis

In order to analyse the interview material nine of the eleven interviews was tape-recorded and all of the interviews were transcribed. The transcription was made to be as similar as possible between the interviews. There are no general rules for what can and can not be left out in the transcription of the interviews, but it is important to transcribe all the interviews in the same manner (Kvale, 1997).

During the interview analysis step is it important to understand the dynamic of the material and compare the material through a structured method (Huberman and Miles, 1994). It is important that the interview is used as a scientific method and that the analysis step is well described. Any scientist should be able to do the same analysis of the respondent’s answers and get the same results as the first analyser (Bell, 2000). A weakness of interviews as scientific method is that the results of the interview analysis tend to become warped. There is a risk that the persons who are involved in the interviews tend to influence each other, which can cause a bias of the interview material. The influences can come from the interviewer to the respondent and vice versa. In the end it means that the results from the interviews do not reflect reality (Bell, 200). It is important that the interview material is frequently critically examined through the whole process from the creation of the purpose of the study to the presentation of the analysis results (Kvale, 1997). The interview analysis was carried through with the knowledge that qualitative interviews are sensitive to extreme opinions, because it can lead to wrong conclusions in the analysis of the interviews (Svenning, 2000).

To analyse interviews an idea analyse method was used. The scientist is free to read through the text as many times as he or she wants and search for specific points in the transcript (Kvale, 1997). Using this method the scientist is able to read through the material and gain a picture of the core of the dialogue (Kvale, 1997). It is important to understand the dynamic in the material and compare data in a structured way (Huberman and Miles, 1994). The frames for the analysis of the transcribed material were based on the theoretical approach according to the definition of the concept of ideology.

When analysing the interviews I examined the respondents’ arguments comparatively with the three analytical parts description of reality, valuations of goals and recommendation of actions. Descriptions of reality refer to how the respondent understands the international and the national Chinese climate policy. What is the priority of the climate policy on the national and the international agenda today? Valuation of goals as an analytical part refers to how the respondents describe how the Chinese climate policy should be. Finally a recommendation of action describes how the Chinese national and international climate policy should change to become similar with the respondent valuations. I used these three analytical components to be able to describe the different interviews and stress the different approaches of the respondents.
4.4 Limitations of the methods and the results

The methods are limited to a literature study of international documents and to an interview study with respondents who are working within the Chinese climate change administration. The document study is limited to 38 documents and the interview study is limited to eleven respondents. This means that the results don’t include all persons working with the climate change issue and all climate change related documents. Since the interviews are carried through with different respondents from different authorities and institutions with different backgrounds. Therefore the results are giving a probable picture of how China is framing the climate change issue. Some of the respondents have backgrounds as agriculture scientists and are therefore focusing their answers on agriculture issues. Respondents with backgrounds as metrological scientists are focusing more on how the anthropogenic emissions will effects the climate. Respondents as energy scientists are focusing on how to reduce the energy consumption and decrease the anthropogenic emissions of GHG:s. Interviewed bureaucrats are more focusing on how their authority is trying to reduce the climate change issue. From the results it is not possible to make a general conclusion of how all individuals working with the climate issue in China are framing the climate change issue. The respondents were selected through the snowball effect, which means that after an interview the respondent was asked if he or she could recommend someone else to be interviewed. This means that I could not select the respondents totally and I was depending on which persons I was recommended to interview.

To be able to use interviews as a scientific method, it is necessary that the interview fulfils two scientific demands. The first demand is reliability, which means that the method used is credible (Lantz, 1993). It refers to how stable the interviews are, whether or not the answers from the respondent are just random so that another interviewer would get alternative answers from the respondent even if conducting the same enquiry. If many people are interviewed about the same issues, the interviewer should reflect whether he or she is asking the same questions to the respondents and if the situation is the same for all the responds (Trost, 2005). If people are interviewed with a specific purpose, they should answer the same questions in exactly the same way if the surrounding conditions haven’t changed (Svenning, 2004). In this study several persons were interviewed with the same purpose and with the same questions. Therefore, were the interview questions described in as much detail as possible to be able to fulfil the demand of reliability? The second scientific demand is validity, referring to how usable the interview results are as scientific material (Lantz, 1993). The validity means that the right persons relevant to the subject are interviewed and the interviewer is asking questions that the respondent is able to answer (Svenning, 2004). To be able to fulfil this second demand I have chosen to interview people with connection to Chinese climate policy sphere.

5. Results

5.1 Results of the document analysis

The documents were analysed according to the definition of the concept of ideology. The content of the documents are presented in the three headlines; “Description of reality”, “Valuation” and “Recommendation of action”. The three headlines are described in more detail in chapter 4.1 idea analyse.
5.1.1. How climate change has been addressed

**Description of reality:** The G77 and China tried to stress the importance of strong national institutions for capacity building in the developing countries. According to the G77 and China it is very important to consider the finance of the capacity building.

**Valuations of goals:** Their standpoint was that the long term plans for capacity building must consider institutional capacity building, capacity building under the clean development mechanism, human resource development, technology transfer between developed and developing countries, improvement of national communication in the developing countries.

5.1.2 Impacts of climate change

**Recommendation of actions:** The G77 and China mainly focus on different aspects of sustainable development. In the proposal they consider the possibility to link climate change issues and sustainable development. The proposal suggests possibilities to connect climate change issues with food production, energy efficiency, the adaptation of ecosystems to climate changes and development of new energy resources. The G77 and China states the importance of discussing climate change in an economic, social and environmental context. They also made a standpoint of how important it is to connect climate change with land use and the use of coastal areas. The proposal clarifies the importance and the necessity of combining international climate politics in trade, social and economic aspects.

5.1.2 The awareness of climate change

**Description of reality:** The group of G77 and China also pointed out the lack of long term plans for capacity building in the international climate negotiations.

**Recommendation of actions:** Improved public awareness and education, coordination and the co-operation of decision making locally and nationally is also important.

5.1.3 Climate change as an energy issue

**Description of reality:** In the proposals they state that technology needs assessments which could include energy reducing technology, identifying and prioritising technology needs, and building appropriate institutions and human capacity for sustainable technology transfer.

5.1.4 The importance of new technology to combat climate change

The G77 and China consider that there is a great need for new technology. The improvement in technology will be necessary to reduce their greenhouse gas emissions and to be able to adapt to climate change. According to the proposal developing countries have a great need for information about new technology and they see the climate agreements as a possibility to gain new technology. To be able to improve the capacity building to climate change in the most vulnerable areas it is important according to the G77 and China to establish mechanisms for the transfer of technology between developed and developing countries. It is also important to agree an understanding of how the technology will be transferred. When new technology is implemented, the implementation should consider environmentally friendly techniques and knowledge. The G77 and China also wants to promote joint research and development programmes between the Annex I parties and the non-Annex I Parties. They also want to decide clear guidelines for how the technology transfer should be administrated and funded. The G77 and China also emphasised the clean development mechanism as important to transfer technology in the proposals.
5.1.5 Economic support and long term investment to combat climate change

Description of reality: Most of the proposals concerned the group of G77 and China’s view of the global environmental facility. The proposals generally described the G77 and China’s standpoints of the fund administration and what the money should be used for. Some proposals concerning the instructions was mainly related to how regional developing banks, the World Bank and UNEP are handling the financial mechanisms.

Valuations of goals: Their view of the adaptation fund is that it should give priority to developing countries that have signed the Kyoto protocol and the foundations should be used for projects to improve the developing countries adaptation capacity for climate changes. Their standpoint is that the adaptation funds should be administrated at the conference of the parties.

Recommendation of actions: In the proposals they also stress the importance of guidelines for GEF, which they think can be more effective and more operational. The G77 and China also disagreed about the importance of guidelines for what the funding should be used for such as technology transfer, adaptation options and strategies for an effective implementation of capacity building.

5.1.6 International climate negotiations

Description of reality: The proposals describe that the G77 and China wants to focus on adaptations to climate changes, vulnerability, financial recourses, technical supports, capacity building, technology transfer and national institutions during the meeting in Kyoto.

5.1.7 Expectations of the international climate negotiations

Description of reality: The G77 and China state that mitigation should be on a voluntary basis for the developing countries and also that the mitigation per capita in developing countries are low. The G77 and China are also regarding the Kyoto mechanisms concerning the joint implementation, emission trading and clean developing mechanism. The majorities of the proposals concentrates on the administration and are working out the details of the clean development mechanism. The four groups of proposals in the Kyoto protocol group deal with compliance. The proposal says that compliance should in the first place concern the Annex B Parties.

5.1.8 Future international climate negotiations

Valuations of goals: The G77 and China states that they don’t support any voluntary commitments of reduction of greenhouse gases under the UNFCCC and the Kyoto protocol. The UNFCCC should also improve the developing countries capability. Related issues to the convention are the G77 and China’s proposals to improve education, training and public awareness of the climate change issues. They also state that the climate change issue is a global question and to solve the problems creates a great need for international cooperation.

5.2 Results of the interviews

Each of the eleven interviews were analysed according to the definition of the concept of ideology. The respondents framing of the climate change issue are presented in the three headlines: “Description of reality”, “Valuation” and “Recommendation of action”. The three headlines are described in more detail in chapter 4.1 idea analysis.
5.2.1 How climate change has been addressed in China

**Description of reality:** According to the respondents China is already facing a climate change which is unavoidable. The respondents think that the Chinese government as well as other developing countries governments is paying more and more attention to climate change. The respondents acknowledge that China considers the climate change as an important issue, both globally and nationally. For several years the Chinese government has declared that China will pay attention to both mitigation and adaptations and the respondents see them both as being equal. The Chinese government has made great efforts to address a climate change. The Chinese government has also coordinated an inter-ministry group of 15 different ministries including the National planning and reform commission and ministry for foreign affairs to address the climate change issue. Many top issues on the Chinese political agenda are related to climate change. However, according to some of the respondents, there is no direct climate policy.

**Valuations of goals:** All the interviewees see the human impact on the climate as a big problem and they also consider that all countries in the world, including China, are aware that the human population has an impact on the climate and, according to the respondents, decision-makers should take actions to minimize the consequences.

**Recommendation of actions:** The respondents think that China has to consider adaptation, to buy time to be able to mitigate a climate change. One third of the respondents think the Chinese government should prioritise the climate change issue even more than it has been done so far and according to some of respondents the Chinese government has focused too much on mitigation. China needs according to the respondents develop there capacity in terms of institutional capacity, scientific capacity and public awareness of a climate change.

5.2.2 Impacts of climate change

**Description of reality:** According to the respondents it is still important to keep in mind that climate changes cause bigger problems in some parts of the world and in other parts of the world less problems. The climate change is especially causing problems in the less developed countries, because the developed countries have a better infrastructure and capacity building than the developing countries have. China is a vulnerable area for climate changes and several observations have shown that the Chinese agriculture, ecosystems and water supplies have been negatively affected by the climate change. Therefore China is considering climate change as an important issue. But one respondent is seeing the climate change not only as a disaster, but also an opportunity for people to develop new skills and technology in response. China has during the last 20 years more or less adapted to a climate change because of the desertification in the northern parts of the country. The increasing Chinese population and economic development is contributing to the fact that it will be very difficult for China to change direction.

**Valuation of goals:** The interviewees are still counting China as a country in a very early stage of development compared with the developed countries. The income per capita is very low seen over the whole country and therefore the government has prioritised the improvement of people’s standard of living rather than focusing so much on the climate change issue. According to the respondents there are big gaps in economic development between urban areas and rural areas. Therefore it is necessary for China to be in a specific stage of socioeconomic development including transport systems, power systems and constructions, even if an economic development will lead to more emissions of GHG:s in the
near future. Also the large Chinese population will be one of the most contributing factors to future GHG:s emissions. One third of group of respondents are seeing the government’s “one child” population policy as a successful tool to reduce the amount of GHG emissions, even if the policy has been criticised by many human rights NGO:s.

**Recommendation of actions:** The respondents do not think it will be possible for China to change development over a night. The most important question according to the interviewees is to ask ourselves if it is possible to combine sustainable development with a high economic growth rate, because China has a very big population and also a very heavy employment pressure. According to the respondents the Chinese leaders have declared that the climate change is both an environmental issue and a developing issue. To address environmental problems the Chinese government has consolidated all the environmental issues including the climate change problem under the same roof. According to the respondents China has also other serious environmental problems to deal with, such as air pollution, soil degradation and desertification. The climate change is just one of the problems and has not been the most prioritised. Other environmental problems such as air pollution have so far been more prioritised.

5.2.3 The Chinese awareness of climate change

**Description of reality:** The respondents think that one of the big problems in China is that the public awareness of climate change is very low. Still most people in China are not aware of the climate change issue according to the respondents. There is a big difference between developed and developing countries concerning the knowledge about environmental problems. In the developed countries most people has a good knowledge about these issues, but in developing countries people have very little knowledge about environmental problems. People are rather focusing on their daily life and how to improve their standard of living. The environment is definitely not as an issue for them and the education standard is not as high as in the developed countries.

“They don’t know and they don’t care about it”
Institutions of nuclear and new energy technology at Tsinghua University

The interviewees are also seeing knowledge problems not only among the public people but also among official decision makers. The problem is that the knowledge about climate change is very limited even among the governmental officials. A decade ago, no one understood the meaning of the words climate change. During recent years the term climate change has become a little bit more familiar to official decision makers because of the increased global discussions, but is still not a very highly prioritised subject.

**Recommendation of actions:** A big problem in China is the ignorance among normal people and decision-makers on a lower level in the Chinese society. Therefore it is necessary with a capacity building, including training to improve the public awareness of the climate change issue. Thus improvements in capacity building shall be conducted to energy use and electricity use policies. According to them the first step is to inform people and then change people’s attitude to climate change. According to the interviewees a capacity building also has to include improvement policies and guidelines regarding environmental issues for social and economic development.

**Valuations of goals:** According to the respondents it will be necessary with long term strategies and the follow up of those strategies to handle climatic change, and to combine
those strategies with sustainable development, including social and economic aspects. Three
fourths of the respondents see the climate change problem as a long term issue, and it is
therefore necessary to implement long term measures to address climate change. According to
them most of the policy makers in China have a tendency to think in short terms regarding the
climate change issue and therefore it is necessary to implement long term policy and include
specific goals for an adaptation to climate change. To increase the capacity building an early
warning system should also be introduced so people can be on alert against weather
catastrophes. To be able to reduce our GHG emissions it will be very necessary to change
lifestyle.

5.2.4 Climate change as an energy issue

**Description of reality:** According to the interviewees the energy security is a very important
issue in many countries and so also in China. According to the interviewees the problem is
that in the future China will have even a bigger demand for energy than today. To continue
with a strong economic development and increasing of people’s living standards will
contribute more GHG emissions. This is confounded by the fact that China has had the fastest
economic development in the world and at the same time uses coal power as the medium to
produce energy, which causes a lot of environmental pollutions not only locally but also
globally. However, the respondents consider coal energy as the only cheap energy medium
that can answerer to the fast economic development in China. The large population makes it
still impossible for China to afford any other energy resources than the coal energy according
to the respondents. According to the respondents it will be a very slow transition to change
the energy medium because China has a big population and a need of economic development.

**Valuations of goals:** According to the respondents the Chinese work to address climate
change has so far prioritised energy efficiency and renewable energy. To make energy
efficiency possible the Chinese government has prioritised the regulation of energy use
through laws and technology innovation. In the latest (11th) 5 year plan the Chinese
government has a target of 20 percent energy efficiency form 2005 to 2010.

“**Saving energy and increase the energy efficiency means to protect the climate in a very good
way.**”

CDM working unit at China state environmental protection administration

Some energy efficiency standards for building and specific heavy industrial process shall also
be implemented. From the interviewees point of view China has to improve energy efficiency
and develop renewable energy sources through new technology in the high energy consuming
industries such as the power sector, industry sector and steel sector. A lot of improvements
can be done but it depends on the political will to take actions against an anthropogenic
climate change. The interviewees think it will be very essential to develop a communication
network for information spreading of the climate change issue on a provincial and local level.

**Recommendation of actions:** The respondents think that it is necessary to include energy
security into a capacity building to be able to address a climate change in China.

5.2.5 The importance of new technology to combat climate change

**Description of reality:** The respondents do not think the Chinese government is content with
the current stage of the international climate agenda. China is missing clear guidelines for an
effective technology transfer, financial support for new technology innovations both for
capacity building and mitigation. Those issues are according to the respondents very limited
in the international community. To reach a sustainable development including mitigation of climate change and adaptation to climate change, a transfer of technology will be necessary. Half of the group of respondents are so far dissatisfied with the current technology transfer, and link their dissatisfaction with the Kyoto mechanisms CDM. According to them the CDM mechanism is not much to rely on in terms of technology transfer because the scale is very limited. Maybe the CDM can reduce emissions of GHG’s in specific projects, but the result from the CDM will not be noticed on a national scale. The rest of respondents view the CDM mechanism as an important tool to give China environmental friendly technology and knowledge about climate change. The CDM will not reduce emissions, but hopefully it will slow down the curve of emissions from energy consumption.

Valuations of goals: So far the technology transfer has been very limited and on a very small scale according to the respondents. The interview persons think that the progress of technology innovation is going very slowly. To reduce the Chinese emission of GHG it is very important according to the respondents to utilise new technology. The single most important factor to contribute to a reduction of green house gas emissions in China is through new innovation and technology.

China has therefore joined the Asian Pacific Partnership (APP). The APP is a result of the lack of agreements concerning technology transfer under the UNFCCC. New technology such as solar energy, wind energy and nuclear energy will be very important instruments to address climate change in China. The respondents consider the transfer of technology to be very important to gain such a technology, and China has clearly given an account that the APP will not replace the Kyoto protocol or the UNFCCC.

The respondents view point is that China hopes to receive new technology through mechanism as CDM. There is already a market based transfer of technology, but the prices are too high and the developing countries can’t afford the technology.

Recommendation of actions: An idea to improve the technology transfer would be to establish an international research on technology sponsored by all members of the international community. For future action to address the climate change capacity building will be very important according to some of the respondents. It will be very important to improve the capacity building to save energy, through innovation of technology. Focus in coming negotiations should be on technology transfer because that’s the only way to solve the mitigation and the adaptation issue.

“For the moment we think that only through technology innovation and with development of new technology it is possible to achieve our purpose to limit GHG emissions”

Department of treaty and law ministry of foreign affairs

A technology transfer between developing countries and developed countries is not only important. It is also equally important to have a transfer of technology between developing countries. A proposal from one of the respondents is to persuade governments in the developed countries to make affords to influence the private sector to transfer or at least share the “know how” with the developing countries.

5.2.6 Economic support and long term investment to address a climate change

Description of reality: According to the respondents the GEF fund was successful five to ten years ago to support environmental projects, but today the GEF is not as successful as it has
been. The problem, according to the respondents, is that the fund gets less and less money to operate with, because the countries supporting the fund get more and more obligations to complete other commitments. Another problem with the foundation is that the supported project has struggled to survive when the foundations have ended. Several of the respondents also identified the bureaucratic procedure to apply for the founding’s as a big problem.

Valuations of goals: The interviewees think that the developed countries have to support the developing countries economy to address a climate change. One third of the respondents think China rather needs to develop their economy instead of economic support from other countries. The different funds are important measures to help the developing countries to address the climate change issue.

Recommendation of action: According to the interview respondents it is necessary for China to develop their economy and infrastructure and to be able to do so it will be necessary to give China time. If China is going to agree to any commitments at all, it will be important to give China space to develop. If China would agree to undertake commitments in a near future it would reduce the Chinese GDP. In a future perspective it is essential for China to continue their economic development to and handle mitigation and an adaptation to climate change. Therefore is it important according to the respondents that the international community improves the administration of the financial mechanisms and especially for the GEF. It has taken to long time to apply and receive money and support from the mechanisms. There are also possibilities to improve the foundations and make the procedure less bureaucratic. It will also be necessary to involve more donators and more money to support the developing countries to face a climate change. According to one respondent it will be necessary with new economic mechanisms for future negotiations beyond the first commitment period. It would be possible to involve the World Bank in a global carbon emission market, with the European market as a model. It would be an effective market based mechanism designed as a “win-win” solution.

5.2.7 China in the international climate negotiations
Description of reality: From the respondent’s answers it can be seen that the climate change issue started to come into focus in China after the first international climate negotiation at the end of 1980’s and especially after the adaptation of the UNFCCC. Most of the respondents clearly declare that without international negotiations the Chinese government would not have done as much as they have done today. China has fulfilled their obligation to the UNFCCC through their GHG:s inventory and have also fulfilled the obligations to the Kyoto protocol to make a national communication plan of GHG:s. The international co-operation has also contributed to convince many sceptical persons. According to the respondent’s answers the Chinese government is regarding the international community as very necessary to handle the climate change issue. According to the respondent the Chinese government has prioritised the climate negotiations and is always sending a large delegation containing both policy makers and experts. According to the respondents the international climate negotiations have had some influence on the Chinese climate change policies. In the same time according to some of the respondents the Chinese national policy has had little effect on the international climate community, especially as China has a big influence on the group of the G77.

Valuation of goals: The respondents think that it will be important to improve the links between climate change and sustainable development. According to the respondents the link between climate change and sustainable development is weak in the international negotiations and could be strengthened through action plans. Action plans focusing on sustainable
development would engage the developing countries to increase the efforts to address climate change.

**Recommendation of action:** Half of the interviewees regard the climate change issue as an international issue that has to be solved internationally. Two thirds of the respondents also believe that the international climate negotiations progress too slowly. The respondents are also waiting to see if people in Europe are prepared to pay the price for a reduction of GHG’s. The respondents also criticise the developed countries for not making enough efforts to address the climate change and to use the carbon sinks as a tool to avoid taking actions against climate modification.

### 5.2.8 The Chinese expectations of the international climate negotiations

**Description of reality:** The interviewees think it will be very important with an understanding between countries different needs in future negotiations. To do so it is important to see the climate change issue partly from the developed countries perspective and partly from developing countries perspective. The developing countries view is that the developed countries have already developed a good life standard and are responsible for the climate change we are seeing today. Still the developing countries have needs and rights to develop their economy compared with the developed countries. In future negotiations the respondents think it will be better to not focus too much on commitments. It will not be possible to push China to agree to voluntary commitments and the risk is that China will leave the negotiation table. It is better to help China reach their energy saving goals of 20 percent than push for commitments.

**Valuations of goals:** According to the respondents the international negotiation has had a positive impact on the Chinese climate change policy, including the UNFCCC and the Kyoto protocol. They see the documents as very useful as international agreements and as a base for future negotiations. It is important that negotiators from different countries come together to discuss, valuate and finely reach an agreement to take actions. The UNFCCC is not the only forum to take action against climate change, it is also a forum to exchange knowledge about the climate change issue. Half of the group of respondents view the international climate change negotiations as a possibility to balance undertaking of GHG:s commitments and economic development. They are waiting with expectation to see if the developed countries have enough political mandates to decrease already agreed GHG emissions.

**Recommendation of actions:** According to the respondents it will be necessary for the developing countries to focus on capacity building and awareness improvement before it will be possible to discuss any undertakings of voluntary commitments for the developing countries. In future negotiation it will be very important for the developed countries to show a good will and take their responsibility for the post Kyoto period. According to the respondents it is important that the developing countries are taking their historical responsibility in the climate negotiations and are acting to prevent a climate change first.

“The father’s habit should be paid by his son”

School of geography at Beijing normal university

### 5.2.9 Future international climate negotiations

**Description of reality:** The interviewees think further negotiations beyond the KP will probably lead to more compromises and we should not expect too much. But the forum of climate change negotiations will continue to exist. Maybe we will have a new protocol or
convention. There is a consensus among the respondents that they do not think China will agree to make voluntary commitments, whatever the degree of pressure will be from the international community.

“We don’t have any commitments but we are still taking actions to reduce our emissions, based on our needs and based on a sustainable development”
The Institute of environmental and suitable development in agriculture

The common understanding for the respondents is that the big conflict in the international climate negotiations is that developed countries have been able to progress their economies for a long time. The problem appears when the developed countries ask the developing countries to reduce their GHG: emissions, which is seen as an obstacle to further economic development. This makes the request from the developed countries unfair. The Chinese people are working hard to gain a better quality of life and a better socioeconomic situation.

Valuations of goals: According to all respondents the single most important issue is to continue the international negotiations in the future and no other institution will replace the UNFCCC and the Kyoto protocol. It has taken too long to negotiate already existing agreements and it would take too long to negotiate a new establishment for climate negotiations. To be able to find an international agreement between nations it will be very crucial to increase the mutual understanding between developed and developing countries.

Many of the respondents think it will be hard to unite behind a solution of voluntary commitments until 2008 after the American election and the fourth IPPC report. Not all the respondents believe in American cooperation even if the US will change their government in the next election. It will still be hard for the US to change position in the climate change issue and implement a KP through the congress and other interest groups. But all of the interviewees are concerned about that the negotiations will continue and not go backwards, and the international community will not give up the work to address climate change. It is still very important to handle the climate change issue through the international climate regime.

Recommendation of action: However the respondents think the biggest barrier to solving the climate change problem through the KP will be if the US will continue to stand outside the negotiations for the Kyoto post negotiation period. Several respondents are reasoning that the US with a good living standard did not sign the KP because it would be a bottleneck for their economic development. According to the respondents China does not have a good living standard and therefore economic development is necessary before China will be able to reduce their emissions. If the US continues to stay outside according to the respondents it is a risk that other countries will opt to do the same. It is also important that European countries are continuing to take obligation beyond Kyoto and show a political will to complete already taken obligations. In future negotiations the hardest problem according to the interviewees will be to solve how much each country should reduce their emissions.

“The problem in the international climate negotiations is that most peoples and countries are selfish and everyone want to improve their life situation”
CDM working unit at China state environmental protection administration

The interviewees think the key factor in the international negotiations for the post Kyoto period will be to reach a sustainable agreement about article 3.9 in the KP. It will be
important for the developed countries to show a political will and undertake commitments during the second Kyoto period.

“If you want other countries to do something, you need to do it by yourself first”
School of environmental and natural resources at Renmin University

6. Discussion
I met each interview respondent face to face and having spent time in China enabled me to reflect about the Chinese view of the climate change issue and other environmental problems. The discussion chapter is balanced between the results from the document study and the interview study together with second hand sources and my own reflections from observations and experiences. I have been aware of problems of values in sciences and therefore I have tried to have a distance attitude to my own reflections. In order to do that, I have strived to clearly distinguish between my own and others opinions. In the same time I have also tried to avoid that my own reflections have influenced the results from the literature and the interview study.

6.1 Reflection of how the respondents are framing the climate change issue
6.1.1 How climate change has been addressed in China
Description of reality: I think it is not surprising that the respondents see climate change as a large problem and it is necessary to take action to address the problem. A little bit alarming is that three of the respondent is seeing adaptation as a possibility to buy time to address a climate change. But the rest of the respondents consider adaptation and mitigation as equal priorities. I think it would be better to make a clear policy regarding both adaptation and mitigation. According to the respondents the Chinese government has declared that adaptation and mitigation have the same priority. The most important issue still remains, is the rest of China seeing climate change as a problem and not only the administration who are daily working with the issue? According to the respondents and literature, decision makers in China are seeing climate change as a problem and that China have done great efforts to address the climate change. My view is that China has acknowledged the climate change as a problem, but a reduced Chinese impact on the climate is only a by-product from other more important issues seen from a Chinese government perspective. I can’t agree that China has done tremendous efforts to address the climate change issue, because it would reflect a more positive attitude in the international climate negotiations and a more significant acknowledgement in Chinese society.

The complete the obligations to the UNFCCC and the Kyoto protocol I think is a step in the right direction but the climate change issue is not the highest prioritised issue if there is a conflict with other political issues. The Chinese government has established an inter-ministry group to address the climate change problem but I think the issue remains whether or not the group can also reach to lower political levels? According to the document study it is important with strong institutions. To address climate change in China I think it defiantly will be necessary to reach all levels in the society.

Recommendation of action: I think it will be important to decentralise the Chinese control body for environmental issues in the future and work directly side by side with organisations and companies. To address climate change I think it will be very necessary to give a control body the right authority to take measurements and control so that laws are followed both within the private and the public sectors. My reflection is that the Chinese society is a top down controlled society and there is not much progress if no directives are coming from the
6.1.2 Impact of climate change in China

**Description of reality:** All the respondents view climate change as a threat against China and that China is a vulnerable country to a climate change. According to the respondents and the literature a climate change will have negative impacts on agriculture, ecosystem and water supplies. In the international documents China and the G77 are also arguing about the importance of linking sustainable development to climate change. I think it is hard to make an analysis if the Chinese government is aware of the fact that the climate change will cause several negative impacts on the Chinese society. At least the interviewed respondents are aware of the negative impacts of a climate change. But the important issue is if the Chinese climate administration has succeeded to convince the rest of the Chinese society. One of the respondents thinks that the Chinese society will adapt to climate change involuntarily, even if an adaptation to a climate change will contribute to a better or a worse living situation for the people of China. Perhaps people in China already have started to adapt to climate change by growing alternative crops and migrating.

The respondent’s stress that the climate change issue is not the most prioritised environmental problem in China and I think it is important to realise that issues people don’t know about is not important for them. First climate change is an invisible problem compared with smog and water pollution. Secondly it is hard to prove that a climate change has caused a visible problem in a small area.

**Valuation of goals:** The respondents think that the Chinese government should prioritise the climate change issue even more than has been done so far. I think this could suggest that people in the Chinese climate policy sphere do not have the power to influence the Chinese leaders. Also some of the respondents think that mitigating a climate change has been too prioritised so far, and in the future adaptation will become more important. I believe that maybe the respondents already are seeing that China is facing a climate change, and that the Chinese leaders have to accept this to prevent the effects from a climate change. I think at the same time it is important to see what will happen in the longer term.

**Recommendation of actions:** According to the respondents and the literature it will be very important to improve the capacity building to address a climate change in China in the future. I don’t think the Chinese people have got the chance to address a climate change yet. If you are not aware of a problem, you can’t do anything to address the problem. I think before a public awareness is reached, China will not have a chance to address a climate change. To be able to address a climate change in China I think the key will be to change people’s attitude of what success means, and not follow the In China today, it seems that a sign of success is to own a large black Audi with black windows. Fifteen years ago many people were still biking, but today more and more people want to take their car down town and not their bike. In Beijing the government is expanding the subway to reduce the heavy car traffic, but I think it is important to change people’s attitude of what economic success means.

6.1.3 The Chinese awareness of a climate change

**Description of reality:** According to the literature, the document study and the respondents, there is a lack of awareness within all levels of the Chinese society as one of the biggest problems to addressing a climate change. I can agree that lack of knowledge is one of the
most contributing reasons to not being able to address climate change in China. It seems as though the inner circle working with the climate change issue are aware of the problem, but I am sceptical that the knowledge about the climate change issue is being spread outside this circle. I think there is great need of spreading the information about climate change to all levels in the Chinese administration. This will be necessary to address a climate change and that government both on provincial level and city level have to work together to reach the same goals. Therefore it is essential to have an exchange of information between different levels in the Chinese society.

6.1.4 Climate change as an energy issue in China

**Description of reality:** According to literature and the respondents, China is consuming a lot of energy. If China will be able to continue their strong economic development I think the Chinese government has to economize with their energy resource, because China will not be able to change their energy consumption in the near future. I also think this is the main reason for the Chinese government to implement energy efficiency laws and not the climate change issue. I agree with the respondents that China is going to increase their consumption of fossil fuel in a near future. I also agree with the respondents that it is today only coal which can answer to Chinas enormous demands of energy.

**Recommendation of actions:** I think China should have binding targets regarding their energy use. I think China’s national target, according to the respondents, to save twenty percent of their energy use can be used as an international target. This would give the Chinese attempt to address climate change a more serious undertone. The same thing could also be done in other developing countries. When the European Union receives new members they normally get respites for the European legislation during the first years of membership and a similar system could work in the international negotiations.

6.1.5 The importance of new technology to address climate change

**Description of reality:** All of the respondents believe improvements of technology as the most important factor to mitigate and adapt to climate change and according to literature, development of new technology is one of the most prioritized political issues. I agree with them, that improvements of technology are very important together with knowledge to address climate change in China.

**Recommendation of actions:** According to the documentary study and the respondent, there are missing guidelines for an effective technology transfer in the current negotiations for the UNFCCC and the Kyoto protocol. They also want to strengthen the base for technology transfer. I do not think this is a problem caused by lack of technology, I rather think this is a problem caused by reluctance to give away technology and knowledge without getting anything back. I think the reason to the transfer problems is that new technology is owned by companies and not governments which make it hard to transfer technology to countries with no ability to pay full prices. I think a solution could be a united scientific organisation, similar to the IPPC but only focusing on technology improvements to address environmental problems such as climate change. The new research centre should be a part of the UN and financed by all the UN members and of course all of the UN members would be free to use the technology innovations.

6.1.6 Economic support and long term investment to address climate change

**Description of reality:** The respondents think it is necessary for the developing countries to gain support from developed countries to address the climate change issue. Two thirds of the
respondents are stating that economic support is not very important to China. It seems as though some of the respondents think it is more important to develop their economy without obstacles from the international community. In the past many environmental projects have been funded by the UN in China and for me it seems harder for China to start any environmental project by themselves and it is necessary to use international foundations and expertise. According to literature, the Chinese work with environmental issues is depending on financial support.

Two of the respondents, who have been working with the GEF, think it takes too long time from an idea to receive the money for projects. According to them many intended projects have not been carried through because the process to get money has taken too long. The big problem is the complicated formula to apply for the money. At the same time the respondents do not have any suggestions for how to improve the situation. The responds also conclude that some of the GEF projects have disappeared after the financial support has ended. I think it is very important to implement the project in host areas for the project, and after projects have ended it is important to evaluate positive and negative issues related to the project. I think the most important issue is how to involve local people, because the purpose of GEF funded projects is to achieve a sustainable development.

**Valuation of goals:** According to the respondents China has to have economic development to address climate change in the future. I think the attitude to climate change is a little bit unconstructive. It is better to see the climate change as a possibility to develop environmentally friendly technology instead to seeing the problem as an obstacle to development. I agree with the respondents that it is not politically possible to agree to commitments in the near future but I think it would be possible for China to agree to binding energy efficiency as already mentioned earlier in the discussion. According to the respondents, having the time to develop their economy is the most important factor to addressing climate change.

**Recommendation of actions:** I think China have the possibility to address economic resources to start to minimize the environmental impacts of their economic growth. According to literature the attitude to environmental issues in China, has been “develop first, clean up later”. I think this is a result of the high speed industrialization, I think this is a result of an improved consciousness and that the Chinese people are ambitious, and they want to gain a better life. Already today, China has got a middle income class which has to take their responsibility for a global anthropogenic influence on climate change. It is important to remember that there is only one earth and all people on the earth are sharing a thin layer of atmosphere.

To address a climate change in the developing countries, I think it is essential to improve the economic support from developed countries and according to the documentary study it is important with clear guidelines. I think it is crucial for the developing countries to receive economic support from the developed countries. To reduce GHG emissions in China it is important that the developed countries are supporting. One of the respondents also sees the possibility to involve the World Bank into an international carbon trade system. I think that it is a positive idea, because it would involve the Chinese companies which are contributing to emissions of GHG’s.
6.1.7 China in the international climate negotiations

**Description of reality:** Most of the respondents do not think China would have made the same progress to address climate change as they have done today without the international climate negotiations and according to literature, China have had an very active role in the international negotiations. I do not think any steps would have been taken in China to address a climate change without the international negotiations. Firstly, the international negotiations have involved China in the climate change issue. This means that Chinese negotiators have met other country’s representatives and exchanged knowledge about the climate issue. I think the international negotiations have had a more positive influence than the respondents think on the Chinese climate policy, not on a specific issue, but the climate negotiations have had a positive influence on the Chinese attitude to address a climate change. Through the international community the information has been spread cross-boundary and the Chinese representatives have been involved in the international negotiations. Without that information I do not think a Chinese national coordinating group would have existed to coordinate the Chinese climate policy. It is also important to not forget the work of IPPC involving scientists from all around the world, including China. I think the IPPC has contributed a lot to the scientific knowledge about climate change in China. Many of the Chinese scientists are involved internationally and within the work of IPPC.

6.1.8 The Chinese expectations of the international climate negotiations

**Description of reality:** Two thirds of respondents have a big fate for both the UNFCCC and Kyoto protocol and they think the documents are necessary for a future climate negotiation. It also seems as if the respondents do not think it will be possible to address the climate change without the international community. I tend to agree with the respondents that international negotiations are very important, even if the developing countries and the developed countries have had a different focus during the negotiations, due to literature and the documentary study. The respondents also see the international negotiations as a forum for negotiators to sit down to discuss different possibilities to address the climate change issue. I see the international community as a good forum to discuss the climate change issue but it has been harder to take actions to address climate change. The respondents view the international climate change negotiations as a forum not only to take action but also to exchange knowledge. So far I think the international negotiations most important task has been to serve as a forum for discussion and not a forum to take actions. China don’t have the same commitments as developed countries, but the international climate negotiations has forced China to deal with the climate change issue.

**Valuations of goals:** The respondents have high expectations to see if the developed countries are going to reduce their GHG emissions and there is a will from the developed countries to address a climate change. To prove that it is possible to address a climate change it is tremendously important that the Annex-one countries will succeed to obligate their commitments. If the Annex-one countries fail to do that, it would send bad messages to the efforts of the developing countries. At the same time the respondents are criticise the Annex-one countries for not doing enough to address climate change. The respondents see for an example the carbon-sink as a scientific uncertainty.

The respondents see the international climate negotiations as the most important issue to continue to address climate change and that the organisation of future negotiations will remain intact. The respondents are all positive to the international negotiations, but I think it is hard to call the international climate negotiations as success. There has been progress but I think drastic undertakings will be necessary if the community is going to address climate change.
change. Sometimes I get the impression that the respondents have too high expectations of the international community. According to the respondents, a mutual understanding between nations is needed. I agree with the respondents that an understanding between countries is very important, but I think the problem is that there is a lack of understanding in the international negotiations. For example it seems as though different countries have different ideas about how to meet their obligations to future negotiations.

6.1.9 Future international climate negotiations
Description of reality: The respondents see an understanding of different varying needs of different countries as very important to strengthen the international platform for cooperation. I agree with the respondents that there is a lack of understanding for different needs. According to literature and the respondents, China is seeing the international climate negotiations with the attitude of the “historical responsibility” and documents from the documentary study do not want to focus on emission targets for the developing countries. I think maybe the main reason for the struggling attempts to find a sustainable agreement in the international negotiation is a result of all involved nations only trying to make their own needs clarified, instead of try to understand other countries needs. The only solution to increase the understanding between nations is to continue the international negotiations, continue with other forums for agreements and maybe arrange non binding workshops. The respondents do not think it will be possible to find an agreement about future commitments for developing countries within a short time frame.

Valuations of goals: The respondents are seeing the US withdrawal from the international climate negotiations as the biggest problem and the biggest obstacle for the international community to continue. From my point of view, According to the respondents the American withdrawal made the rest of the international negotiations transparent. The respondents hope that the US will come back to the negotiations after the American election in 2008. I can agree with the respondents that it is not good that the country with the largest emissions of GHG’s and one of the biggest economies in the world think that they can’t afford to address a climate change. It doesn’t give any good spirit to countries with less economic welfare, to try to address a climate change in their own manner. According to the respondents it is even more important that the European countries continue to make obligations to address the climate change. Even without the US the respondents think the international climate negotiations will continue beyond year 2012.

Recommendation of action: According to the respondents and literature, the developing countries want to focus on long term goals, combining addressing a climate change with social, economic and environmental development in terms of sustainable development. It seems as though the respondents want to have a joint umbrella-tool to address all issues concerning sustainable development, including climate change. I think this can be an obstacle within the international cooperation to address environmental problems. A problem might appear when countries around the world come together to solve problems jointly and they have different views about how to address a problem. So far the international community has chosen to use one tool for each environmental issue, for example the convention of biodiversity and the convention of climate change.

6.2 How the respondents and China are framing the climate change policy
Analysing scientific material it is important to question the reliability of the sources. In this thesis interviews were conducted. When analysing interviews it is important to question why the respondents have answered as they have done and the underlying factors which are behind
their answers. The interviewer should question if the source of information is independent or is dependent on other influences (Thurén, 2005). The respondents are framing the climate issue similar with some exceptions. An example is when the respondent is questioning if China really has a climate change policy. The results from the study show that the respondents follow the official Chinese climate policy. Therefore it is important to question why the respondents have answered according to the Chinese official policy. I think the reason for that is that the respondents are employed by the Chinese government and are representing the Chinese climate administration. The respondents are nearly forced to frame the climate change issue according to the Chinese official climate change policy. This can be seen as the respondents are rather framing the Chinese official climate change policy than their own view of the climate change issue.

As a result of the comparison between how the respondents have framed the climate change issue and how China has frame their climate change policy in the international climate change negotiations. It is important to question why China has framed their climate change issue as they have done. I think one of the respondent’s quotations describes the Chinese attitude to the climate change issue: ‘all countries want to improve their own situation and therefore all countries are indirectly egoistic’. I do not think China is alone to have that attitude to the climate change issue and that is a reason why the international climate change negotiation is struggling. Game theory has been used to explain underlying factors for problems in mutual contexts (Stern, 2006). Sandler (2004) argues that some international actions are more likely to succeed compared to other actions. Actions which have a self interest are more likely to succeed. Bottle-necks for the international climate negations are that it is hard to estimate cost to address a climate change, concrete specific benefits to address a climate change in a short time perspective, and uncertainties of how the climate change will effect specific areas.

During the IPPC top meeting in Bangkok in May 2007 China tried to politicize the outcome of the latest IPPC report. China together with India and Brazil tried to convince the IPPC secretariat to admit in the document that the rich nations have the responsibility for the climate change issue. China also tried to convince the secretariat to cancel some of the parts in the outcast of the report (Johansson, 2007). I think this initiative is to protect the Chinese sovereignty and economic development. As the respondent states, China is not prepared to make any commitments during the post-Kyoto period.

**7. Conclusions and future studies**

The purpose of this thesis was to analyse how actors within the climate policy sphere in China frame the climate change issue and it is not surprising that the respondents see the climate change as a large problem and that it is necessary to take action to address the problem. According to respondents and McCarthy (2001) a climate change will have negative impacts on agriculture, ecosystems and water supplies, but they also see big problems to addressing a climate change in China. The Chinese economy and population development are according to the respondents the two largest obstacles to addressing climate change in China. To combine an economic growth with a sustainable development, it will take time to balance the development (Kejun et al, 2005). In the same time the respondents think it will be necessary for China to develop their economy to be able to address climate change in the future. The respondents consider the lack of awareness within all levels in the Chinese society as one of the biggest problems to addressing climate change. To address climate change the respondents think it will be necessary to mitigate climate change through energy saving improvements, and to be able to do so an innovation of technology will be necessary (Wei et al, 2006).
Half of the group of respondents does not think China would have made the same progress to address a climate change as they have done today without the international climate negotiations. To address climate change in China the respondents thinks it is necessary for the developing countries to gain support from the developed countries (Zhang, 2005a). The interview respondents see the international community as the greatest possibility to solve the anthropogenic impact on the climate, but more compromises in future negotiations will be necessary. They also see the American withdrawal from the Kyoto negotiations as detrimental to future negotiations. The respondents think the key factor for future negotiations beyond 2012 will depend on how successful the developed countries are at addressing the climate change. The respondents are regarding article 3.9 in the Kyoto protocol as the most important negotiation issue, they do not think that China will agree to any commitments (Zhang, 2000b).

Comparing how the respondents frame the climate change issue with the proposals made by the G77 and China, the understanding of the climate change issue is very similar. Both the respondents and the documents are framing the climate change issues simili. As the respondents are involved in the Chinese climate change policy making process it can be seen as either that the G77 is influencing the Chinese climate change policy or that China is influencing the G77 climate policy.

According to the respondents the goals for China within the sphere of international climate co-operation are to combine the addressing of a climate change with social, economic and environmental developments in terms of a sustainable development (Xiaohua and Zhenmin 2003). To reach the goal the respondents think that the international community should prioritise an improvement of the capacity building to address a climate change. The respondents are also missing guidelines for an effective technology transfer in the current negotiations for the UNFCCC and the Kyoto protocol (Stern, 2006). The respondents consider that historical responsibility is the most important factor behind the conflicts between industrial and developing countries in climate change negotiations. According to the respondents China has not caused the present climate change and instead the developed countries are responsible. At the same time China takes the view that the western countries have both the economic strength and the knowledge to address climate change, and if China is going to address climate change the developed countries have to support China both with economic resources and with knowledge (Zhang, 2000b).

This study concludes that China has a large influence on G77. The G77 mostly contains countries which are in the developing phase. Other groups with a large influence on the international climate negotiations are the Umbrella group containing the United States and other OECD countries. The third group is the countries within the European Union. To contribute to an improvement of the understanding between different parties in the international climate negotiation it would be interesting to analyse how actors within the climate policy sphere in the US and the European Union frame the climate change issue and compare the results between these three actors.

Other further studies would be to analyses which interest groups influence the Chinese climate policy, including how the Chinese climate policy is changing and what causes the change. An important study would also be to investigate how to improve the climate change knowledge among lay people and decision-makers within all levels of the Chinese society. Another study would be to investigate transaction-costs for CDM projects in China.
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Appendix one
Appendix one describes a full schedule picture over which documents the six groups contains in the text analyses. Some of the groups also contain smaller groups of documents.

List of documents
Submissions from Parties, 2004, Additional information relating to the comprehensive review of the implementation of the framework for capacity-building in developing countries, UNFCCC
Submission from a Party, 1999, Capacity-building, UNFCCC
Submissions from Parties, 2003, Comprehensive review of the implementation of capacity-building frameworks for developing countries and countries with economies in transition and actions taken by Parties relating to capacity-building, UNFCCC
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Submissions from Parties, 2006, Views on steps to be taken to regularly monitor capacity-building activities, United Nations framework convention on climate change
Submissions from Parties, 2005, Draft decision proposed by Jamaica on behalf of the Group of 77 and China, Subsidiary body for implementation
Submissions from Parties, 2005, Draft decision proposed by Jamaica on behalf of the Group of 77 and China, The Conference of the Parties
Draft proposal submitted by the Group of 77 and China, Memorandum of understanding between the conference of the parties and the global environmental facility, UNFCCC
Views from Parties, 2001, Note by the president of the COP six, UNFCCC
Position papers on draft decisions for COP five submitted by the Group of 77 and China and the European Community and its member States, 1999, National communication from parties not included in the annex 1 to the convention
Submitted by the Group of 77 and China, Proposal on the financial mechanisms, UNFCCC
Comments by Parties on the financial mechanism, 1998, Review of the implementation of commitments and of other provisions of the convention, UNFCCC
Submission by the Group of 77 and China, 1998, Position papers on matters before the eight sessions of the subsidiary bodies submitted by the group of 77 and China, UNFCCC
Submissions from Parties, 2003, Financial mechanisms: the special climate change found, UNFCCC
Position paper submitted by the Group of 77 and China, 2002, Funding under the convention, UNFCCC
Proposals from the parties, 1997, Implementation of the Berlin mandate, UNFCCC
Submissions from Parties, 1999, Procedures and mechanisms relating to compliance under the Kyoto Protocol, UNFCCC
Submission by the Group of 77 and China, 1997, Activities implemented jointly under the pilot phase, UNFCCC
Submissions from Parties, 1999, Further proposals from Parties on issues raised in decision 7/CP.4, paragraph 1 (a), (b) and (c), Subsidiary body for scientific and technology advice

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Draft decision proposed by Jamaica on behalf of the Group of 77 and China, 2005, Article 3, paragraph 9, of the Kyoto Protocol: consideration of commitments for subsequent periods for Parties included in Annex I to the Convention, Conference of the parties serving as the meeting of the parties to the Kyoto protocol

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Submissions from Parties, 2003, Issues relating to the implementation of article 2, paragraph 3, of the Kyoto, UNFCCC

Approach paper by the G77 and China on recommendations on guidelines and format for preparations of initial communications from non-Annex 1 parties, 1996, National communication, UNFCCC

Draft decision submitted by the Group of 77 and China, 1996, Guidelines for preparation of initial communications from non-Annex I Parties, UNFCCC

Draft list of items proposed by the Group of 77 and China, 1997, High-level segment attended by ministry and other heads of delegation, UNFCCC

Submissions by Parties, 1998a, Development and transfer of technology, UNFCCC

Submissions from Parties, 1998b, Development and transfer of technology, UNFCCC

Submissions from Parties, 2000a, Development and transfer of technology, UNFCCC

Submissions from Parties, 2000b, Development and transfer of technology, UNFCCC

Group of 77 and China, 1997, Draft decision on preparations for COP four, UNFCCC

Positions of the Group of 77 and China, and of the United States of America, 1996, UNFCCC

Approach paper by the Group of 77 and China on the format for communication of information by non-Annex I Parties, 1994, Matters relating to arrangements for the financial mechanisms implementation of article 11

Submission by the Group of 77 and China, 1998, Group off 77 and China, position paper on preparations for COP four, UNFCCC
Appendix two

Appendix two contains the interview guide.

Interview guide

1. What is your institution working with?
   - What is your position and what kind of work are you doing?
   - What influence does your organisation have on the Chinese climate policy?

2. Do you see the climate change as a problem and why?

3. Can you tell me about the Chinese national work with the climate change issues?
   - What has been prioritized in the Chinese work with the climate change issues?
   - adaptation
   - mitigation
   - other issues
   - How prioritised do you think the climate change issues are at the Chinese political agenda compared with other issues (social and economic development)?

4. Do you think the international climate negotiations have effected China national climate policy and how?
   - How do you think the ratifying of the UNFCCC and the Kyoto Protocol has affected Chinas national climate policy?
   - How do you think the work with implementing international decisions on a national level in China is going; and why?
   - Do you think the national climate policy making in China influences the international climate negotiations and discussions? How?

5. How do you think the development of Chinas economy and population has affected the Chinese climate change policy, national and international?
   - During the last years China has started to consume a lot of energy which has contributed to larger emissions of green house gases. How do you think it is possible to reduce the emission of green house gases?

6. Is China content with the international climate agenda as it is today or are there other more important questions that should become more prioritised then they are today?
   - What is your view on the international climate negotiations priority of adaptation and mitigation?
   - Do you think the capacity building should have a larger priority on the international agenda?
   - What do you think China will focus on during future climate negotiations and how?
7. Do you think it is necessary with an international climate regime (UNFCCC and the Kyoto protocol) to handle the climate change issues?
   • Do you think it is important with international climate negotiations to solve the climate change issues?
   • How do you think the development of the international negotiations should carry on in the future, becoming as effective as possible?
   • Are there other ways or institutions to solve the climate change issues?
   • Are you familiar with the Asia-Pacific partnership?
   • Do you think the Asia-Pacific partnership for clean development and climate will replace or work as complement to the UNFCCC and the Kyoto protocol?

8. Can you describe the Chinese relation to the UNFCCC financial mechanisms for a climate change?
   • Are there any possibilities to improve the administrations of the global environmental facility and the adaptation fund?
   • Do you think there are clear guidelines of what the foundation should be used to or are there possibilities to improve them?
   • Are you content with the financing of the capacity building?

9. Do you see links between climate change and sustainable development, including population and economy, in the international climate negotiations?
   • Is it possible to combined sustainable development and address a climate change? If so, who to do it?

10. How important do you think transfer of technology will be to reduce the green house gases in China?
    • Do you think the mankind has to change its life style?
    • Has focus on technology transfer been too much on mitigation then adaptation?
    • Do you see the CDM mechanism as a possibility to reduce the green house gas emissions? Why?

11. What do you think will happen with the international climate negotiations during the post-Kyoto period after 2012?
    • Which are the most important issues to solve in a future international climate negotiations?
    • Which problems will be hardest to solve in a future international climate negotiations?
    • Which instruments will be necessary in a future climate regime?
    • Will it be important with a historical responsibility?
    • Which are the biggest conflicts between North and South in the international climate negotiations do you think? Why?
    • If the economic development looks like today, do you think China will be able to do agree to any voluntary commitments to reduce their green house gas emissions?
    • What do other countries have to do to make China do voluntary commitments?