Abstract

This thesis has a closer look at the underlying processes blocking climate protection in big developing countries. The issue of climate change gained a lot of attention in the last years. But despite this attention and the regular held meetings of the world's political leaders could so far neither a successor-agreement for the Kyoto Protocol be concluded, nor were sufficiently effective efforts of climate protection detectable. Many Western countries expect the big developing countries to contribute as well this time (as these were excluded in Kyoto). But especially these big developing countries are not willing to agree on binding climate protection measures yet. This might on first glance appear illogic, as not only is a significant contribution of these countries needed to stop climate change, but would also the developing countries be most effected by the disastrous consequences of climate change. The question, what processes are underlying the decision of big developing countries to not contribute to climate protection, seems therefore very justifiable. This thesis now tried to analyze the underlying reasons for the blocked climate protection in the big developing countries of Brazil and China. This choice, due to the big differences of these countries, reflects a most-dissimilar systems design. The analysis was carried out on the basis of a theoretical framework consisting of the theories of neorealism, liberalism, the two-level game and the problem of collective action. The analysis then focused both on the domestic level of the chosen countries and on the international arena. In the former individual actors that caused national incentives or decisions to not carry climate protection measures out were in focus, whereas on the international level interdependencies were in focus of the analysis. These interdependencies were to be found between different international actors, but were also structural interdependencies. As a result of the analysis it could be concluded that the main trigger for a climate protection blockade in both countries was the desire for quick economic development, in Brazil caused by a 'cooperation' of big agricultural corporations and the government and in China caused by government policy that is not questioned, but rather supported by the population.

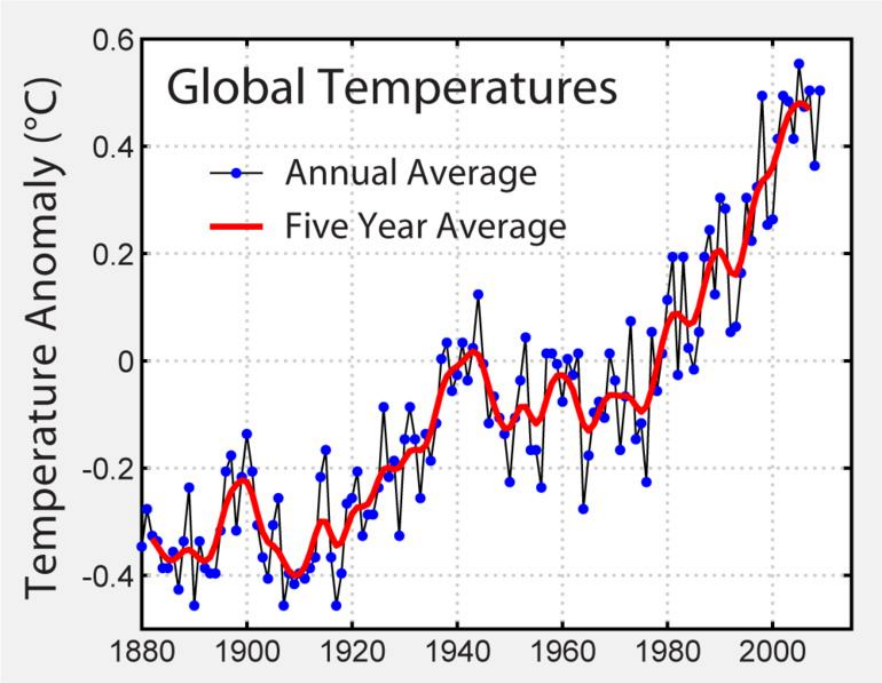
1 Introduction

Despite the ongoing global economic crisis the issue of climate change (CC) is raising awareness among the media of the world. It is discussed if it is still ethical to fly around the globe with discount airlines and how to measure the own carbon footprint.[1] The focus on CC reached a new peek during the 2009 COP15 meeting, which was covered intensely by all important news agencies.[2] But despite this high media coverage, the attention of many millions of people around the world, high hopes on the role of the new US administration, and the fact that CC is a global problem that is having its effects on all countries in the world, the delegates of the assembled nations could not come to an agreement entailing concrete numbers of CO^2 reduction or other measures to tackle CC. The disillusion that was felt by many delegates is reflected in a statement of the Brazilian President Lula da Silva, who expressed his hope that "some angel or some wise person will come down to this plenary and put in our heads the intelligence we lacked until now".[3]

That such measures tackling CC are necessary is evident if one takes a look at the newest results of climate research. The concentrations of CO^2, CH4 and N^2O, the three important anthropogenic greenhouse gases (GHG) in the atmosphere have increased immensely in the last decades. This increase was so big that the concentration of CO^2 and CH4 lies now outside the natural concentration of these gases of the last 650,000 years.[4] Consequences of the GHG increase can be noticed already today, eleven of the twelve years 1995-2006 rank among the twelve warmest years ever measured.[5] The average world temperature already increased by 0.7-0.8C° since 1901 and is expected to increase by further 2-6C° until the end of the 21st century.[6] The IPCC sees an increase between 2C° and 4.5C° as most probable, 3C° being the 'best estimate'. An increase of less than 1.5C° is seen as highly unlikely. In regard to the regions standing in focus of the analysis the IPCC projects a warming of 3.8C° for the Tibet region, of 3.3C° for East Asia and 3.3C° in the median for the Amazon region until the end of the century[7] (for more details see Appendix 1, sections 2 and 3). Furthermore, most sources go so far as to claim that the increase of weather extremes, the sea level rise and the shrinking of arctic ice in the last years and decades is an outcome of CC that is already detectable.[8] In example disappeared already 20% of the glaciers that feed the major rivers in China on

[1] Toulmin 2009 p.1
[2] Die Zeit 2009;The New York Times 2009;Politiken 2009;The Guardian 2009;oglobo 2009
[3] Lula da Silva 2009, after thinkaboutit.eu
[4] IPCC 2007 I p.2-5;Stern 2006 p.3-4;Toulmin 2009 p.17-18;Giddens 2009 p.18;Shiva 2008 p.10
[5] Toulmin 2009 p.17-18;IPCC 2007 I p.5
[6] IPCC 2007 I p.5;Stern 2006 p.5;Giddens 2009 p.18;Dumas p.7
[7] IPCC 2007 I p.881
[8] IPCC 2007 I p. 5-9;Gehrels 2009 p.330;Dumas 2009 p.11-12;Shiva 2008 p.10

ground of CC, and the phenomenon is predicted to continue in the future, bringing danger to the water supply of approximately 2 billion people in China and other Asian countries.[9]



Despite Lula's plead for more intelligence that shall help to solve the CC problem also big developing countries such as Brazil bear a large responsibility in this phenomenon. Brazil's rainforest is suffering under a vast destruction since decades; at least 20% of the Amazon rainforest have been burned or chopped down. This contributes significantly to CC, first through the CO^2 that is sat free by the burning itself and second through the missing capacity for binding CO^2.[10] Most Brazilian governments have been very passive on the issue of rainforest protection. The total CO^2 emissions of Brazil have increased by more than 50% since 1990; the per capita increase was very similar to that.[11] China, another big developing country, is since 2007 the biggest CO^2 polluter[12], and while the country's economy grew by 8% in 2008 its climate emissions increased by 14%.[13] Every

[9]Giddens 2009 p.223;Khoday 2007 p.4-6
[10]Wallace 2006; Revelli 2009;Simon 2008 p.1
[11]WRI 2003 II
[12]Pittock 2009 p.289;Toulmin 2009 p.18;Giddens 2009 p.183
[13]Nordhaus/Shellenberger 2009 p.11

week at least one new coal power plant is built in China.[14] In total, CO^2 emissions have doubled in the last nine years and were in 2009 amounting to 8.1 billion tons.[15] These facts in combination with the expectation that most of future's CO^2 emission growth will come from big developing countries underline the responsibility these countries bear for the further development of CC.[16]

One can come to wonder about this inactivity in climate protection (CP), if one bears the high costs that will roll over developing countries with CC in mind if the phenomenon is not tackled. The Stern Review, a study on the economics of CC speaks of a loss of global GDP between 5 and 20% if no further action is taken. This report further claims that the damages of CC will not only hit most countries of the world, as the problem is global in scope; but will further have the gravest effects in developing countries; e.g. if CC will only extend by 2C° in average, serious negative effects such as rainfall change, water shortages, a greater amount of floods and storms, an increased number of malaria infections and a decline in crop yields are predicted in many developing countries. All these consequences will - directly or indirectly – have an increasing effect on the death tolls due to CC in developing countries.[17] Other sources further speak of related developments such as a higher amount of migration from poor to rich countries and a higher conflict potential in those areas of the world that are effected seriously.[18] Further could so-called feedback effects (e.g. the unfreezing of permafrost soil) lead to another 1-2 C° of warming until the end of the 21st century (see Appendix 1, sections 1,4 and 5).[19]

In regard to the two countries that shall be in focus of the analysis, it is to say that CC will have grave impacts on nature and population as well. In China, the melting of the Himalayan glaciers will lead to increased flooding and further rock avalanches due to destabilization of slopes. When the glaciers have receded, decreased river flows and with that droughts will follow the floods, with around 250 million people (around 19% of the population) being influenced negatively.[20] Also some of China's coastal areas will be in danger, due to sea level rise in combination with flooding of the rivers and heavy rainfalls and tropical cyclones; areas that face an alarming forecast are the deltas of Changjiang (inhabiting the cities of Shanghai, Ningbo and Guanzhou) and Zhujiang.[21] The rising sea level and possible storms and floods could destroy the infrastructure and the

[14]Stumbaum 2008 p.49
[15]Olivier/Peters 2010 p.6
[16]Stern 2006 p.169
[17]Stern 2006 p.Vi,55-57;IPCC 2007 II p.11-18;Santarius 2007 p.19
[18]Welzer 2008 p.26-27;Barnett 2007 p.1364;Santarius 2007 p.20
[19]Stern 2006 p.2-11;IPCC 2007 I p.15
[20]IPCC 2007 II p.13;Stern 2006 p.63
[21]IPCC 2007 II p.40-41,493;Stern 2006 p.77;IPCC 2007 I p.879;Yu 2009 p.25

industrial facilities of the booming east-coast, with that some of the country's most important economic zones are in acute danger. Such catastrophes would diminish the development chances of the country and thus would bring the political stability of the country under pressure.[22] Freshwater availability is projected to decrease in the large river basins from the 2050s on, due to CC in combination with growing demands on ground of higher living standards.[23] Drying rivers will also significantly decrease the intensely used hydro power, and by this endanger China's energy security.[24] The desertification of the country will be accelerated as well.[25] Millions of environmental refugees could be the consequence of the influence of CC on the water situation.[26]

Also in Brazil the risk of becoming a victim of floods will increase for people living in certain delta areas due the rise of the sea, these deltas being the Amazon and the Sao Francisco delta.[27] The metropolis of Rio de Janeiro will on ground of its position at a low lying coast be under increased danger of being hit by tropical cyclones.[28] Risks of flooding will increase in South-East Brazil as well on ground of higher precipitation in this area.[29] These regions are economically especially important, therefore significant economic damage would (most probably) be caused in Brazil as well if CC stays untackled. Despite this, precipitation is projected to decrease in large parts of Northern Brazil, contributing to a drying effect of the Amazonas region.[30] On ground of the lacking precipitation, the tropical forests of the Brazilian region of eastern Amazonia are thus under danger of being replaced by savannas, this could induce a CC increasing feedback effect, as the CO^2 absorbing forests would be destroyed.[31] The increase of droughts in Amazonia is additionally increasing the risk of destructive fires in the area.[32] More droughts in the North-Eastern part of Brazil would most probably speed up the urban migration of small farmers, bringing these farmers from one precarious situation into another, and worsening the already alarming social situation in the metropolises.[33]

[22]Bauer/Richerzhagen 2007 p.22; Sternfeld/Oberheitmann 2009 p.28
[23]IPCC 2007 II p.13;Bauer/Richerzhagen 2007 p.21
[24]Friedman 2009 p.406
[25]Bauer/Richerzhagen 2007 p.21
[26]Sternfeld/von Waldersee 2005 p.62
[27]IPCC 2007 II p.41
[28]Ibid. p.586
[29]Ibid. p.583
[30]IPCC 2007 I p.895
[31]IPCC 2007 II p.583;Yu 2009 p.25;Simon 2008 p.1
[32]IPCC 2007 II p.586
[33]Ibid. p.587

In face of these numbers and scenarios one has to ask what holds these big developing countries back from taking effective CP measures. The current hesitant and uncooperative climate policy of the political key players in general and the political leaders of the mentioned developing countries seems like a paradox. It can be assumed as certain that it is not lacking knowledge among the political and societal elites concerning the problems CC brings that provides for the mentioned inactivity, for top politicians in China and Brazil receive scientific reports on CC, and have themselves ordered to extend research on the topic; e.g. maintain the Chinese authorities a 'National Climate Center' and allowed the Chinese Academy of Science to launch an 'Assessment Report on Climate Change'.[34] And despite from that, the pollution, CO^2 caused smog and destroyed environment is evident in Beijing by only looking out of the window, as Thomas Friedman writes: "It's not like they [the leadership] could miss the problem" as "on a bad day, [one] can't see the building next door".[35] Many researchers, e.g. Sternfeld or Freeman/Holslag from the BICCS, conclude that CC is becoming a top issue on the Chinese politics agenda,[36] e.g. on ground of the fact that the issue of CC was integrated in the 2006-2010 Five Year Plan and was with that mentioned for the first time in one of China's five year plans.[37] Regarding the consequences of CC Freeman/Holslag therefore argue that: "the Chinese government has increasingly […] recognized both the impacts that already exist, and the potential risks for the future".[38] Still, no influential agreement was signed in the last climate meetings such as the COP15, the Kyoto agreement failed to deliver results that are anywhere near sufficiency[39] and the mentioned numbers of emission in China and elsewhere speak for themselves. Therefore is it to believe that some underlying processes, e.g. egoistic political or economical interests, must be responsible for the CP blocking policy in China and Brazil. These underlying processes shall stand in the focus of this paper.
The research question of this thesis shall therefore be,

How and why is climate protection blocked by domestic and global processes in big developing countries such as China and Brazil?

A possible answer is the perceived need of these countries to further develop without taking other needs such as CP into account, as a statement of Hu Jintao from 2008 indicates: "China's central task is now to develop the economy and make life better for the people."[40]

---

[34]Friedman 2009 p.405;Gang 2007 p.532;Freeman/Holslag 2009 p.13
[35]Friedman 2009 p.403
[36]Sternfeld/Oberheitmann 2009 p.29-30;Freeman/Holslag 2009 p.2
[37]Freeman/Holslag 2009 p.11
[38]Ibid. p.4
[39]Gang 2007 p.531-534
[40]Hu Jintao after Giddens 2009 p.221

Other possible answers to the research question are domestic pressure groups interested in economic gains that are pressing the national government to give up on CP and rather serve their business interests, or a fear among the political elite of loosing national sovereignty by cooperating with other key players on the CC issue. On the global level the globalized economic cycle that is found today or an imaginable destructive influence of other international players such as the US or the EU might be reasons for the defensive position of the mentioned developing countries. It might be that similar answers for the analyzed countries will be found, but also very different answers seem possible taking the very different nature of the countries into account.

The relevance of this research question for the chosen developing countries and the world as a whole is obvious if one bears the severe consequences of CC for the people in these countries in mind. If not tackled immediately and extensively CC will lead to more killings through natural disasters, more hunger, more inequality and possibly more refugees and conflicts.[41] The biggest developing countries bear already a distinctive amount of responsibility for CC, and projections show that future increase of GHG's is for the very biggest part to be found in the big developing countries, they are therefore responsible key actors in regard to CC.[42] As Giddens wrote: “what key nations do is going to be crucial.”[43]

[41]Stern 2006 p.Vi,55-57;Welzer 2008 p.26-27;Barnett 2007 p.1364
[42]Gurria 2006 p.50
[43]Giddens 2009 p.226

2 Method

2.1 Choice of countries

The focus of this paper shall be on the CC politics of big developing countries; the chosen countries in this context are China and Brazil. Various reasons lead me to choose exactly these countries. First both obviously qualify for the category of big developing countries, with China raising its GDP by 8-13% each year between 2001 and 2008, and raising from being an economically weak country for most decades in the 20th century to the world's third biggest economy.[44] China is projected to overrun the US as world's biggest economy in the run of the actual century.[45] Brazil equally increased its GDP by more than 4% in average in the last five years and rose to spot eight on the list of world's biggest economies.[46] Both countries inherent further a great political power, with China being clearly in lead though. This as China not only is home to the world's biggest population but is further a nuclear power and holds a permanent seat in the UN Security Council and further owns one of world's biggest armies that is spread over the earth's fourth biggest country by land.[47] Another source for China's worldwide influence is its enormous foreign exchange reserve (around 2.5 trillion $).[48] Further is China also an influential regional power and is determining the politics of countries such as North Korea or Burma.[49] Due to this influential role in combination with the sustaining enormous economic growth rates, many claim that the 21st century will end to be the 'Chinese century'.[50] Though not that powerful, some of the mentioned attributes apply for Brazil as well, as the country is similar to China not only the biggest country in the region by landmass and population but also a regional political leader.[51]

Second both countries are as mentioned key players when it comes to CC. This as the countries are both among today's biggest climate polluters, with China being the biggest since 2007 and Brazil ranking high on the list as well (at least on rank six). Therefore would a climate agreement without China and Brazil not make much sense for the other key players (e.g. the US and the EU).[52]

[44] Worldbank 2010 I;Worldbank 2009 I
[45] Fischermann et al. 2010 p.2
[46] Worldbank 2010 II;Worldbank 2009 I
[47] Worldbank 2009 II
[48] Fischermann et al. 2010 p.2;Scholz 2010
[49] Kirchner 2007;Bader 2010 p.3
[50] Lynas 2009 p.3
[51] Worldbank 2009 IV;Schenk 2009 p.1; Vargas 2008 p.2-4
[52] Simon 2008 p.2;Pittock 2009 p.289;Giddens 2009 p.183

Third, despite the mentioned similarities the two countries are characterized by great dissimilarities as well: this is valid for the countries' political systems, their history and (political) culture. Furthermore, and especially important in face of the overall topic, the countries show extremely different attributes when it comes to energy production; whereas Brazil's energy supply is to a large extend grounded on renewable sources (around 40%, including combustible renewables such as biofuel)[53] and is therefore often classified as country with a clean or even 'green' energy generation (e.g. by President da Silva or Ban Ki Moon),[54] China's energy consumption is grounded on the burning of coal; as coal makes up for 80% of China's energy needs, making China the world's biggest coal producer and consumer.[55] Choosing exactly those countries delivers therefore the chance to analyze the problem of blocked CP from oppositional starting points: China is the biggest emitter by increasing something (the GHG's), whereas Brazil violates the climate by cutting something down (the rainforest).

However, the fact that two very different countries are chosen for this research classifies the research design as a comparative research design and in a more narrow sense reflects a most dissimilar-systems-design (also called most different systems design).[56] This design appears to be most suitable for exploring the similarities and differences of climate politics in the chosen countries and to gain a deeper understanding of the same. The most dissimilar systems design tests hypotheses under completely different circumstances, not only one certain variable as in the most-similar-systems-design. The most dissimilar systems design tries to find explanations for the same occurring phenomenon in different countries, therefore the most dissimilar systems design refers to the so-called 'method of agreement' invented by John Stuart Mill. In this method possible causes of the set phenomenon (in this case the nonexistence of CP) that shall be explained are compared in the very different countries; if now one of the possible causes of the phenomenon is found in all of the compared countries, this particular cause is with a strong probability a key cause of the to-be-explained phenomenon.[57] If now according to this explanation certain causes of the blockade of CP could be found in the very different settings of both Brazil and China, a strong indication for the importance of these causes would be delivered. In that case the results of the research project could be described as very robust.[58]

[53]IEA 2007 p.10
[54]Revelli 2009;Fatheuer 2009 p.37
[55]Friedman 2009 p.406;Freeman/Holslag 2009 p.7
[56]Bryman 2008 p.58-59
[57]Mill 1843 p.388-391
[58]Przeworski/Teune 1970

2.2 Choice of theories

The first main school of IR theory that shall be integrated in the theoretical framework is neorealism. One reason for why neorealism was chosen is that it can portray a fear of many state leaders in connection with CP. The train of thought of such leaders might look like the following: 'If my country lowers its economic ambitions or industrial activity, while other states ignore the problem and go on with the 'old' style of production, these other countries will grow stronger in relative terms, which means that they can increase their power capabilities. The latter then poses a threat for the position of our country in the world and our national security'.[59] There are indications that such a fear has a significant influence on the perspective of state leaders on the climate issue: e.g., so far no real cooperation on CP could be established, the state leaders are rather searching for reasons why their country should stay out of a cooperation, while all or most others should join.[60] As Chen Gang points out on the behavior of the governments of the key actors: "all hope to get a 'free ride' or to shift their burden on to other nations".[61] Therefore the hypothesis that political leaders around the globe still act according to the neorealist pattern is justifiable and makes an integration of neorealism in the theory part of this paper almost compulsory.

Further shall Olson's problem of collective action be integrated in the theoretical framework of this research. Olson's writing about the non-preparation of collective goods on ground of individual and egoistic rationalizing (described as 'free-riding') is closely connected to the theory of neorealism that was described before. But other than neorealism and similar to Putnam (as will be seen), sees Olson a possible solution for the problem of non-cooperation, namely selective incentives; this being another reason for the analytical value of Olson's theory. Another reason for integrating this theory is that its analytical starting point lies already at a scenario with a large group of actors (similar to the situation of climate negotiations).

Further shall the IR theory of liberalism be added to this thesis, as the insights on the processes on the domestic level that influence national and international CC politics that are delivered by Putnam's two-level-game are not sufficient. Although some claim the opposite, this thesis assumes that neorealism and liberalism can coexist in one theoretical framework. Liberalism puts a sharper focus on the domestic processes, a level of politics that is (almost) totally neglected by the theorists of neorealism. Whereas neorealists willingly decided to leave domestic politics out, in order to gain clearance and to not be forced to integrate too many variables in the analysis, liberalists do the

[59] Kane 2005 p.17-18
[60] Der Spiegel2010
[61] Gang 2007 p.528

opposite: they go in depth on the domestic level in order to understand the analyzed phenomenon in detail. On ground of these differences in focus it should be possible to integrate both theories in one theoretical framework. The view that both theories are under circumstances combinable is shared by several political scientists, e.g. Joseph Nye who stated: "the sharp disagreement between Realism and Liberal theories is overstated. In fact, the two approaches can be complementary."[62] Therefore it appears necessary to me to integrate a theory that puts more light on the unit level (domestic individuals or group actors) and not only on the systemic level (the states in the international arena). An analysis that puts equal focus on both levels appears in my opinion to be much more valuable and reliable.

A further part of the theoretical groundwork of this paper shall finally be Robert Putnam's two-level-game. The choice of this theory can be justified with the theoretical tools that allow insights in international negotiations and the interdependence of domestic and international political processes that are delivered by this theory. The issue of CC is highly dependant on international agreement, as only common efforts deliver the chance of measurable improvements when it comes to CP; therefore a theory that delivers insights in the mechanism of international negotiations seems highly relevant. This view is shared by political scientist Jon Barnett who claims that: "the positions of various countries in the climate regime are nevertheless largely the product of a two-level-game".[63] Putnam's theory further seems to be a valuable tool for analysis in face of possible political trade-offs between countries to the disadvantage of CP, and in favor of other policies (e.g. focus on security politics). The for climate politics highly important link between domestic and international politics is at the centre of Putnam's theory as well, this being another reason for integrating the two-level-game in this thesis.

[62]Nye 1988 p.238
[63]Barnett 2007 p.1367

2.3 Choice of sources

For the analysis part of this thesis very different kinds of sources were accessed. As neither in the case of China nor in the case of Brazil reliable or sufficient sources concerning GHG emitting activities were published by the authorities other sources had to be explored. Two of the most used sources on this behalf (especially in the part on Brazil), were articles and statistics from Greenpeace and Mongabay. The first is an independent non-profit NGO with the aim of ensuring "the ability of the earth to nurture life in all its diversity." As Greenpeace is an independent organization, which is guaranteed by the fact that it only accepts donations from individuals or foundation grants.[64] Mongabay is an independent website publishing news on environmental issues. The page is used as source by a broad spectrum of serious media (e.g. CNN, CBS, NBC or Wall Street Journal) and was named one of the top-15 environmental websites by the Time magazine.[65] These arguments should illustrate that both Greenpeace and Mongabay are to be evaluated as reliable sources for research on the chosen topic.

In general did I try to hold a balance between articles, books and contributions from social science sources and articles from newspapers and specialized organizations in the field, which often entailed more or actual information. Especially for the documentation of the events at COP15 newspaper articles had to be the primary source, as too little academic material is published on this conference yet. I tried to also integrate work from Brazilian and Chinese authors in the respective parts (e.g. Rodrigues/Soares or Gang Chen). I further integrated 'hard' statistics from organizations such as IEA, UNDP or the 'Netherlands Environmental Assessment Agency'. The parts focusing on the CC attitudes of populations in China and Brazil base on a collection of recent original polls, conducted by respected opinion research centers, such as e.g. Gallup. For the natural science base of this thesis the IPCC reports and the Stern Review were the primary sources. An explanation for this choice can be found in Annex 1, section 1.

[64] Gilbert 2008
[65] Time Magazine 2008

2.4 Definition of climate protection

In the following the term of CP shall be defined for this thesis. A definition of this crucial term of the overall research question seems necessary as very different things can be understood under CP; misunderstandings concerning the meaning of the frequently used term shall be prevented.

My definition of CP shall for the biggest part be in line with the common definition of 'CC mitigation' that is to be found in natural science. The latter term refers to the aim of preventing the CC process as far as still possible, which means to reduce damage and costs by not giving the problem space to develop (e.g. replacing CO^2 emitting with CO^2 free technology). CP then describes a course of action that provides for a radical decrease of emissions, leading to a limitation of CC and the following costs and catastrophes. In other words a political course that provides for the sufficient reduction of the three earlier mentioned GHG's, so that the trend of growing emissions is turned around. Therefore is 'real' CP according to this definition only carried out if climate emissions are decreasing and if the remaining amount of total emission is so small that a warming of more than 1.5C° is prevented. The latter number describes the amount of warming that is on the one hand not to be prevented any more, and on the other hand describes the point of temperature increase that marks the entrance in a very critical range of warming for the small island states.[66] To avoid a ppm-concentration of 550 and a warming of 2-5C° (what would be the case if the emission growth would continue with actual speed) already in 2035,[67] big emission cuts in both developed and developing countries would have to be carried out: e.g. to limit emission growth to 500ppm until 2050, the developed countries would have to cut emissions by 60% on a 1990 basis, whereas the developing countries would have to cut emissions by 35% on 1990 levels.[68] It is concluded by an overwhelming majority of scientists in the field, that the costs of mitigation are far lower than the possible costs a not tackled CC would bring.[69] Kemfert and Rosenkranz estimate that by cooperating in CP measures, the governments of the world could reduce the costs of CC from 20% of global economic output to only 1%.[70] Also Stern concludes that mitigation efforts would decrease the costs of CC by large; his review estimates that by annually investing 1% of GDP in mitigation measures, the current amount of GHG's in the atmosphere could be reduced by 25% until 2050.[71]

[66] Newmarch 2010 p.2;IPCC 2007 I p.12
[67] Stern 2006 p. 169
[68] Ibid. p. 459
[69] Kemfert 2007 p.14;Rosenkranz 2007 p.22
[70] Kemfert 2007 p.16;Rosenkranz 2007 p.22
[71] Stern 2006 p.211-212

Most policy CP strategies focus on mitigation, but this mitigation is sometimes intended with rather exotic means. A proposed mitigation solution was e.g. 'modifying the solar radiance', as it was proposed by the Bush administration, or dreams of shooting sulfate-based aerosols in the atmosphere in order to cool the same, or to feed the oceans with iron in order to induce the growth of phytoplankton, a microorganism that might capture carbon through photosynthesis.[72] However, only such measures are defined as CP, which diminish emissions of climate aggressive gases, and not any pseudo-solutions that only try to cure the symptoms but not the illness.

A 'solution' that shall not be understood as CP as well is the switch to nuclear energy production, as it is considered in e.g. India, China or possibly also in the US. The reason for this is that this energy source is on the one hand not as environment friendly and secure and on the other hand not as cheap and effective as it is often proclaimed. In regard to the former should it be noted that nuclear power brings the unsolved problem of final storage of nuclear fuel rods and that the necessary uranium mining emits large amounts of GHG as well. That nuclear energy brings further risks in connection with nuclear accidents and nuclear proliferation has often been portrayed. Second, is it to be noted that due to the low share of nuclear power on energy consumption, even a quadrupling of the current amount of plants would reduce global GHG emissions by only 4%.[73]

[72]Schmitt 2010; Shiva 2008 p. 30-32

[73]Schultz 2010;Sternfeld/von Waldersee 2005 p.57; Greenpeace 2009 I p.1-2; Greenpeace 2008 p.3-5; Shiva 2008 p.24-30; Rosenkranz 2007 p.24

2.5 Connection of theory and analysis

The analysis of the political processes in the chosen countries that are blocking CP will be carried out in connection with the established theoretical framework. The theory part of this paper will entail an explanation of the connection of domestic processes and international negotiations (Putnam) and a description of the relevant parts of the IR theory schools of neorealism and liberalism, besides an explanation of Olson's collective action problem. This theoretical framework will then be taken up in the analysis part to see how and which domestic processes harm CP directly by GHG emitting actions, and how and why these processes indirectly harm CP by influencing the governments (and their actions on the international level) of the chosen countries.

It should be underlined that the theoretical framework of this thesis is seen as a self-contained unit, no part alone could explain the analyzed processes sufficiently, only with a combination of these theories this can be done. The mentioned theories are therefore complementary in regard to the analysis of the posed research question.

This broad and self-contained character of the theoretical framework determined the analysis part of this thesis significantly, as it inspired the content, the sequence and the structure of this analysis. The nature of liberalism determined that at the beginning of the analysis an investigation of the domestic factors blocking CP, carried out from a liberal point of view, is to be found. This means that the attitude and influence of the population, the role and importance of the corporations and the domestic motivations of the government were analyzed for this purpose. The further analysis chapters take these results up and investigate how the blockade of CP in the chosen countries is determined by international political and economic interdependencies and interactions of countries and governments. Neorealism and the theories delivered by Putnam and Olson were predestinated to come into play in this second step of analysis, as this part is mainly dealing with neorealistic politics and negotiation lines, free-rider problems, the question of justice in CP or the issue of national sovereignty. Putnam's theory is especially helpful for connecting explaining factors from the domestic and the international level. However plays also liberalism a distinctive role in the 'international part' of the analysis. Further provided the theoretical framework a helpful pattern of thought while the necessary research was conducted and the analysis was carried out. The theoretical framework provides in effect for an analysis that tries to gain a full-fledged explanation of the reasons responsible for the non-deliverance of CP in Brazil and China; may these reasons lie at the domestic or international level, or may they be determined by agencies or structures.

3 Theory

3.1 Neorealism

At first the IR theory of neorealism shall be explained. This theory is based on the traditional realism theories (e.g. by Hans Morgenthau) and emerged during the decades of the Cold War, when it became the dominant IR theory of the time. Prominent authors of neorealism are Kenneth Waltz, Joseph Grieco or John Mearsheimer[74]. After the end of the Cold War the theory was first declared dead, foremost by those who saw 'the end of history' reached as e.g. Francis Fukuyama,[75] but also the new approach of constructivism (of e.g. Alexander Wendt)[76] found more adherents at that time. First with the Bush administration and the new wave of terror at the beginning of this century came neorealism stronger into focus again.

The reason why neorealism shall be used in this paper is its prevalent ability of explaining the course of action of large parts of the world's political leaders on the international political level, this being valid for the cases of China and Brazil as well, as will be seen later.

The basic assumptions of neorealism (following Waltz) shall now be explained: First, the actors in the international arena are the states; NGOs or individuals are not distinctive actors according to this theory. Next is the focus less on the (bad) human nature as in Morgenthau's classical realism[77], but rather on the determinants of the structure of the international environment.[78] Furthermore is the international political system characterized by a constant state of anarchy and a following craving for national security. The mentioned anarchy is defined by the fact that in the international system no higher authority that could enforce certain common rules or norms, or that could plead for certain common interests, is to be found.[79] States now seek in this anarchic structure to sustain or improve the own position in the international system.[80] On ground of this anarchy is the whole international system shaped by a constant state of insecurity about the intentions of the other states, with the result that security becomes the highest aim of politics.[81] Therefore, are in this anarchic system those states that are

[74]Waltz 1979;Grieco 1988;Mearsheimer 2001
[75]Fukuyama 1992
[76]Wendt 1992
[77]Morgenthau 1963
[78]Waltz 2000 p.18
[79]Waltz 1979 p.88,126
[80]Grieco 1988 p.602
[81]Waltz 1979 p.186

the most powerful also the most influential and the most assertive. This power of states is now grounded on a state's power capabilities; these capabilities are e.g. militaristic or economic resources, but also the size of the territory or the number of citizens.[82]

The position and behavior of states in the international system is now defined by these power capabilities. If e.g. exactly two states possess much more power capabilities than all other states, the international system will transform into a 'bi-polar' system, as e.g. during the Cold War.[83] Small or weak countries will be more eager to search for alliances whereas big or strong countries will rather pursue unilateral policies. Therefore it can be said that in neorealism power (the capabilities) is in contrast to classical realism seen and used as a resource and not desired as an end in itself. The most stable constitution reaches the anarchic international political system according to Waltz in the mentioned bi-polar system, here uncertainty and instability are the lowest and a 'balance of power' can be sustained.[84] This balance of power is according to neorealism the only chance to sustain peace between the dominating countries and is with that an adequate means of guaranteeing the highest desire of every state according to the neorealistic perspective, namely security. This makes clear that the strategy of balancing power is only an outcome of the logics of the international structure in neorealism, and not an aim in itself, instead the ultimate end is always security.[85]

Other possible power distributions that can result from the distribution of capabilities in the international political system are, besides the mentioned bi-polar system, unipolarity and multipolarity. In a unipolar system only one country is dominating the international processes, in other words the ruling of a hegemonic state in the international system; examples for such 'superpowers' could be the ancient Rome, the British Empire in the 19th century, and (at least for some, including Waltz)[86] the US since the end of the Cold war. It should be added, that in neorealism the hegemony of a single country is seen as rather unstable, as the egoistic politics of a hegemon causes repulsion among the other states, and as the “absence of a threat permits policy to become capricious”.[87] Waltz claims that the hegemony of a state is always only a temporary phenomenon and will be balanced again after an indefinite period of time, Waltz calls this the 'balancing imperative'.[88] A multipolar system in contrast describes a distribution of power between several equally strong countries; an example for this would be the power distribution between the big European states before the start of the First World

[82]Ibid. p.97-99
[83]Ibid. p.98-99;Waltz 2000 p.27
[84]Ibid. p.161-162
[85]Ibid. p.126,128
[86]Waltz 2000 p.28
[87]Ibid. p.29
[88]Ibid. p.28-30,37

War. Especially in this multipolar power distribution one will find alliances and counter alliances of countries to find the mentioned balance of power.[89] Waltz claimed already a decade ago that despite the hegemonic status of the US in world politics, a development to multipolarity would take place, as candidates for others poles he named China and the EU.[90]

The definition of state capabilities as the single determinations for the differences of state policies makes evident that in neorealism the ideological orientation of a state does not make a difference for the behavior of this state in the international environment.[91] States are functionally similar units; the importance of national attributes (such as a democratic or autocratic style of government) as determinants of foreign policy is minimal.[92]

Especially important in connection with the issue of CC and the fact that solutions on the problem will have to be delivered by international cooperation, is that neorealists see the developments in the international political systems as a zero-sum game. The latter means that if one state increases its capabilities, the position of this state in the system is strengthened and the position of all other states weakened; the improvement of the position of the one state worsens the position of the other states, the focus in neorealism is therefore on the relative and not the absolute meaning of gains. Therefore, if capability gains of other actors decrease the own position in the international system, the gains of others should be prevented.[93] This calculation mirrors one of the essential differences of neorealism from e.g. liberalism, where the creation of absolute gains is always seen as positive for the own position, no matter how much other states gain.[94] It is this explained focus on relative gains in neorealism that according to this theory makes cooperation between states a seldom occasion in the international system, and even if cooperation can be build up, are they foredoomed to not sustain for long. [95] The focus of states on the relativity of gains goes so far, Grieco claims, that states occasionally are willing to forego possible absolute gains, if as a result gains of others states that could lead to an increase of these states in the international order can be prevented.[96]

[89]Waltz 1979 p.98,168-169
[90]Waltz 2000 p.36-37
[91]Waltz 1979 p.99
[92]Ibid. p.96-97
[93]Ibid. p.70,106
[94]Lamy 2005 p.214
[95]Grieco 1988 p.601-602
[96]Ibid. p.602

It becomes apparent from the upper interpretation of the international system as a zero-sum game that states are generally to be defined as individualist, rational actors, which seek to maximize the own benefits and capabilities and minimize the own losses and risks (and so increase the own security); an which are furthermore favoring self-help over cooperation.[97] The anarchic and highly competitive international system is the reason for this focus on self-help.

As in the international system own losses are the gains of other actors and vice versa, and as states are simply maximizing rational actors that cannot be forced to pursue any policy that is shaped by common norms or rules by any higher authority, the international system is logically governed by mistrust between all actors, all other states are potential enemies and threats to the own position and security. Therefore the overall aim of states according to neorealist theory is survival in this aggressive and hostile international environment. This is then prevented for by focusing on the national security at all times; shaping the international policies of all states.[98]

[97]Waltz 1979 p.72,91,106-107
[98]Ibid. p.91,126

3.2 Olson's Problem of Collective Action

This section shall add the problem of collective action to the theoretical framework of this paper. The basis for this section is Mancur Olson's work on the 'logic of collective action'. This is another theory dealing with non-contribution of individual actors to common problems. According to Olson one cannot expect to find individual actors in large groups to contribute to the production of collective goods. Collective goods are to be defined as goods that are produced by large groups[99] or organizations and that are endless and further underlying the principle of non-excludability; this means that also actors that have not contributed to the production of the collective good, are able to enjoy the same,[100] e.g. can a rescued climate be described as a collective good. The reason for the non-production of collective goods is after Olson the non-excludability of these goods; this attribute makes it rational for every actor to not contribute to the good, but to only make use of its benefits; such an actor is called 'free-rider'. As this calculation is carried out by every actor of the group the production of the collective good is finally prevented. According to Olson not enough members of the group will be willing to deliver the investments that are necessary for the production of the collective good. For every individual actor it is the most rational option to become (or at least to try to become) a free-rider instead of an investor.[101]

Olson finally names one option for the production of collective goods in big groups. As proposition for this he defines that those that contribute in the production of collective goods receive special benefits that are named 'selective incentives'. Such incentives are goods or services that are provided by the organization or the groups and that are only allocated to those that take part in the production of the collective good.[102] In this way selective incentives motivate through their attribute of excludability, which as described is not given in a group without such incentives. Examples for selective incentives could be cheaper tickets for paying members of a football club, or in a less material sense prestige or friendship that one comes to enjoy by contributing to the production of a collective good. Also these social selective incentives are seen by Olson as rational motives for participation, whereas he claims that they are - due to the necessary close contact between members - more likely to work in smaller groups.[103]

[99] Groups are defined as a bigger number of individual actors that are acting in an aggregation, a union of these actors is not necessary,Olson 1998 p.7
[100] Olson 1998 p.13-14
[101] Ibid. p.35
[102] Ibid. p.49-50
[103] Ibid. p.59-60

Olson further alludes that the use of selective incentives put organizations or groups in the situation that for their members the production of the collective goods looses priority, it is degraded to a 'by-product' and the attainment of the selective incentive gains priority. The selective incentives in Olson's theory can be seen as very similar to the 'side payments' actors can negotiate for in Putnam's two-level-game.[104]

Another option for groups or organization to bring their members to contribute to collective goods is simply the use of force. Such use of force is in Olson's opinion rather to be found in actions by states and less by groups or organizations (e.g. the coercion of citizens to pay taxes to state institutions).[105] In the case of CC such a use of force is only imaginable if a huge part of the states of the world would press one key actor to carry out CP measures as well, as a superior force that can really punish a defecting state is not provided so far; the power of the UN seems extremely limited when it comes to CC.
As central claims of Olson it is to summarize that actors decide if to participate in the production of a collective good or not, by carrying out solemnly rational and egoistic considerations; on ground of this kind of considerations, members of big groups will come to the conclusion, that participation to such an end is irrational for every individual actor. Therefore, a collective good will not be provided. As solution Olson introduces the usage of selective incentives, as these can make participation in collective action rational.

[104] more on that issue in 3.4
[105] Olson 1998 p.38

3.3 Liberalism

Also the IR theory of liberalism shall be part of this thesis. As mentioned earlier is this second grand school of IR in my eyes combinable with neorealism and therefore delivers another valuable analytical tool for the following analysis. In liberalism the main focus is other than in neorealism on the domestic level, this delivering an additional perspective. The actors standing in focus are not states, but individuals, groups, organizations or corporations.[106] Just as in neorealism (and the other presented theories) these actors are assumed to act on clearly rational considerations and in average in a risk-averse manner.[107] To be risk averse means in this sense to "defend existing private opportunities […], while remaining more cautious about […] cost and risk in pursuit of new gains." In effect will such an attitude lead to status quo oriented policies.[108] Moravcsik thus emphasizes that it is still possible that some single individuals will be willing to risk "costly conflict for improbable gain."[109] The idea of man is again that of a 'homo economicus', not that of a 'homo sociologicus' (where people would rely on norms or roles). And thus just as in neorealism are the actors in liberalism trying to achieve the best possible outcome for oneself instead of trying to reach the best possible result for the collective.

A core assumption that is to be found in all liberal approaches is that politics works in first place as a flow from the bottom to the top of the political system. As David Easton already claimed in 1957, deliver inner-societal actors the political system with inputs. These inputs can either demand something (e.g. tax cuts) or deliver support (to special action of the government, the government as a whole or even the political system as a whole).[110] The inputs of the inner-societal actors are then processed in the political system and outputs are delivered. The outputs (e.g. certain reforms) are then met with inputs from the mentioned actors again. Positively evaluated outputs will rather cause new support inputs, whereas negatively evaluated outputs will most probably be the source for further demands.[111] Easton's description of inner-societal inputs and outputs reflects the view that politics inside of a political system works as the described flow from bottom to top. This view was shared by Andrew Moravcsik forty years later; Moravcsik further claimed that it is the inner-societal groups that determine the preferences of the state on the international level: "State-society-relations [...] have fundamental impact on state behavior in world politics. Societal ideas, interests and

[106] Moravcsik 1997 p.516
[107] Ibid.
[108] Moravcsik 2008 p.236
[109] Ibid. p.237
[110] Easton 1957 p.384-394
[111] Ibid. p.395-399

institutions influence state behavior by shaping state preference".[112] The state-institutions rather represent the interests of those groups or individuals who gain the lead over their competitors in the inner-societal struggles. Such dominating groups will occur in every political system, as no possible system could be so perfectly democratic that no group would gain more influence than others. Especially those groups with a sufficient amount of financial resources and a high level of organization and information access are likely to win a strong influence on domestic politics. According to Moravcsik may powerful individuals or groups be placed entirely 'outside' the state (outside of politics or administration), or also 'within' the same (politicians, bureaucrats or officials).[113] Because of the more uneven distribution of the mentioned resources, the differences of the power of the groups will be bigger in authoritarian states. There will be fewer powerful groups, yet will these be even mightier than the most powerful in democratic societies. The reason for this is, that in autocratic systems interest groups will not get the chance of free democratic competition, but rather will it be those groups that stand close to the government, the government party or other ruling circles (e.g. the military) that dominate the generation of preferences in non-democratic states; even the government itself can be seen as interest group (this is also valid for democratic systems). Also among these few groups in autocratic systems a competition about shaping the preferences of state politics is emerging (e.g. a competition between nationalistic and market-liberal circles).[114] Shifts in control over the power resources have implications for the domestic distribution of influence; that means that e.g. with the change of the political system from autocracy to democracy the 'power balance' between the domestic groups is likely to shift.[115]

The mentioned groups determine their material or ideational goals "independently of politics, then seek to advance those ends through political means."[116] The states then try to realize these preferences in international negotiations with other states, as the mentioned individuals and groups are unable to achieve these policy preferences by their own.[117] Therefore states appear to be important actors in the theoretical model of liberalistic theories as well. It should be noted that state 'preferences' are not identical with 'state strategies', the former being goals that shall be achieved with the help of the latter. These state strategies can be bargaining demands, institutional arrangements, militaristic or diplomatic measures et cetera.[118] As the preferences of states will be different, the realizations of the preferences of every state will be constrained and no

[112]Moravcsik 1997 p.513
[113]Ibid.p.518;Moravcsik 2008 p.238
[114]Moravcsik 1997 p.518
[115]Moravcsik 2008 p.237
[116]Ibid. p.236
[117]Ibid. p.237
[118]Ibid. p.237-238

country will be able to realize its preferences entirely.[119] The result of the constrained preferences will then be either new conflicts or compromises. Conflict is more likely when the realization of the preferences of one state and its most influential groups necessarily causes costs on the expense of another state and its most influential groups.[120] Such a scenario is likely to be found in climate politics.

In relation to neorealism an explanation that leaves space for a coexistence with liberalism can be found when it comes to the role of the state; it can be admitted that there is not a formal government above states, but the existence of governance and possible cooperation and communication is also acknowledged.[121] It is further possible to combine the liberal approach that trade and economic incentives alter the decisions of actors, with the realist approach that states try to preserve the own status, as states will react on changes in world economy, transnational interactions and technology in order to keep up their international status quo.[122] The states are therefore important actors in liberalism as well. Moravcsik's liberal theory contains a domestic (the shaping of preferences) and an international component (other states as obstacles),[123] and is combinable with neorealism in my theoretical framework: the anarchic structure dominates the action of the individual actors (here: the states) in the international arena (on ground of the missing higher authority) whereas on the domestic level an interplay between the individual actors and the higher authority (here: the state authority) is seen.

[119]Moravcsik 1997 p.520-521
[120]Moravcsik 2008 p.239
[121]Nye 1988 p.249
[122]Ibid. p.250;Moravcsik 2008 p.242-243
[123]Jackson/Sørensen 2003 p.132-133

3.4 Putnam's Two-Level Game

One of the main theoretical approaches that shall be used in this paper is further Robert Putnam's Two-Level Game. Putnam's considerations on the interrelations between domestic and international politics and international political negotiations are highly relevant for this paper, as the issue of CC in the analyzed countries is not only determined by domestic or international processes, but a combination of both. The use of Putnam's theory in the field of CC is supported by scholars in the field; e.g. argues Jon Barnett that the positions of most countries in the climate regime appear to be "the product of a two-level-game in which national leaders seek to maximize the domestic interests […] on the basis of their reading of domestic interests, and seek to minimize the negative effects of international factors on this domestic game".[124] Putnam's approach further seems to be a valuable tool for analyzing political trade-offs between key countries in terms of CC as will be elaborated later.

The first basic assumption of Putnam's theory is that state-leaders are to be seen as players in a two-level game. In the latter metaphor negotiations between states build level one, whereas the domestic level builds level two. At the domestic level lobby groups try to pressure the political elite to integrate their interests when making political decisions. This 'lobbying' can be carried out in the form of organized interest groups (e.g. unions or trade associations) or simply by aggregated public opinion.[125] Politicians seek influence and power on this domestic level through the construction of coalitions among those pressure groups. The national political leaders seek to satisfy the domestic pressure groups by delivering the wished outcomes in international negotiations. Often it is the case that initial positions are configured in the domestic process before the international negotiations are starting. Simultaneously, the political leaders will try to avoid repercussions (negative outcomes for the own country) at the international level and will then come back to the domestic level and try to achieve ratification (that is acceptance) of the outcomes of the negotiations on level one. The 'ratification' of the international agreement on the domestic level thus has to be made without any national modification; the latter would automatically mean a rejection of the international agreement. Therefore the outcome of the domestic evaluation of an international agreement has either to be a yes or no; a re-opening of the content of the agreement is not possible.[126] As many international agreements only work by unanimity, the decision on the domestic level is between the proposed agreement and the failure of the international agreement as a whole.

[124] Barnett 2007 p.1367
[125] Putnam 1988 p.434-436
[126] Ibid. p.436-437

To meet the requirements at both levels is important for the political leaders, “neither [...] can be ignored by central decision-makers.”[127] The latter, as moves on one level affect the situation at the other level. Any political leader who fails to deliver results to the domestic pressure groups risks to destroy his coalition with the mentioned pressure groups or even to lose office at the next election, and conversely will every leader who destroys an international consensus on ground of a special domestic situation bring his country (and the own administration) in an unfavorable position. In any case will an upcoming round of important international negotiation influence the domestic discussion on a certain issue and conversely will the international negotiations be influenced by the need for domestic acceptance or the possible domestic consequences in general.[128] The situation becomes complex for the players, as the actions that are rational at one level can be irrational on the other level; e.g. could defection on an international agreement due to domestic pressure be rational on level two but due to a possible international isolation of the own country irrational on level one. Political leaders might react on this by trying to perform different rhetoric at the two levels; e.g. to stage oneself as climate savior domestically, but to not allow any concessions in order to prevent CC at the international level. Nevertheless, this tactic is only working as long the politician is able to conceal the gap between inner rhetoric and action on the one hand and international action on the other hand.[129]

A different important aspect of the two-level game, is the influence of the character of governance in a country. The described processes on the domestic level, the discussions and the work of interest groups, seem much more likely to take place in democratic systems. Nevertheless, the acceptance of an internationally negotiated law or regulation needs “not to be democratic in any normal sense.”[130] This means that also in non-democratic states processes of level two are to be found, only are in such systems the means of influence different: State leaders will most probably not be influenced by equal voting of every citizen, but rather it will be those circles in the non-democratic state that anyway are in a more influential position (e.g. military elites, party elites, social networks of the power holders) that will solely dominate the domestic process and that will suppress the 'lobbying' of other, bigger groups or even the majority of the population. Still can the mentioned small groups disagree with each other or with the state leaders, e.g. might party elites rather accept international measures of disarmament than military elites.

[127] Ibid. p.434
[128] Ibid. p.436
[129] Ibid. p.434
[130] Ibid. p.437

Putnam further establishes his concept of 'win-sets'. With the latter term Putnam describes the set of all possible agreements in international negotiations that will find ratification on the domestic level. Every country now has a different win-set on a certain issue (e.g. CP measures), that means that any successful agreement will have to be within the win-sets of every participating country.[131] International agreements become more probable if win-sets of states are 'overlapping', that means show similarities. Overlapping win-sets will logically rather be found when win-sets of negotiating countries are big.[132]

In connection with the latter it is to be mentioned that according to Putnam, the relative size of the win-sets on level two (that is the differences of the sizes of the win sets among the negotiating countries) plays an important role for the outcome of the negotiations at level one: If the win-set of a country is big in comparison to the win-sets of other countries, this country will be 'pushed around' by the other countries, as the countries with smaller win sets will argue that the country with the big win set has more 'negotiating room', they will try to pull it inside the range of the own win set.[133] The countries with small win sets will argue that the proposed international agreement is not standing a chance of acceptance at their domestic level, and should therefore be changed. Therefore leaders who have a rather weak standing 'at home' will be able to drive a better bargain at the international level than leaders who have a very solid standing. Because of this seemingly paradox mechanism participants in international negotiations may demand from their opponents to ensure enough negotiating room beforehand of the bargaining at level one.[134] The win set of a country might further be expanded by international political trade-offs: the leadership of country X will offer the leadership of country Y a side payment which expands the win set of country Y and gains agreement of this country on level one.[135] As an example might in regard to CC a blockade of a costly CP program at level two be overcome by agreeing on side benefits for the country applying the program (e.g. money, jobs or trade benefits). An international political trade-off in regard to CC is thus possible with the opposite aim as well: the trade-off is then not focusing on bringing agreement on CP measures, but the opposite: A country might not press for CP measures in negotiations with another country in order to receive side-payments or support on other policy fields.

[131] Ibid. p.437-438
[132] Ibid. p.438
[133] Ibid. p.440
[134] Ibid.
[135] Ibid. p.450

Further an explanation for why defection in international negotiations occurs is delivered. Putnam establishes the terms of 'voluntary' and 'involuntary' defection, the former referring to defection on Level one and the latter to a defection on level two. Voluntary defection now occurs when an actor on level one is reneging in a rationalistic, egoist manner in the coincidental absence of enforceable contracts. Such a defection behavior is associated by Putnam with the problem of collective action (3.2).[136] The explanation of voluntary defection further makes clear that all actors are assumed to be rational actors. Putnam additionally points out that among international players who meet again (what in case of the big countries is constantly the case) the 'temptation' of voluntary defection is strongly reduced, as here excessive reneging would bring high political costs. Involuntary defection in contrast occurs when a leader is not able to deliver a promised ratification of the international agreement on ground of a misinterpretation of the win set on level two. The smaller now the win set of a country, the more likely will involuntary defection occur.[137]

The last important part of Putnam's theory is his explanation of the determinations of win sets. He distinguishes between three sets of reasons: First depends the size of win sets on the distribution of preferences, power and (following) political coalitions on the domestic level. One of the basic assumptions among this first set of reasons is, that the lower the costs of a collapse of an international agreement for the most influential groups in a society are, the smaller is the win size.[138] A point that should not be left out is, that the inner-societal interest and participation varies across different political issues, this variation in interest has an effect on the win size, e.g. will in the case that costs of an agreement are concentrated on a small group, opposition against the agreement be strong from this group.[139]

Regarding the mentioned coalitions, will a leadership have to decide, which of the internal interest groups it wants to appease in the international negotiations and whose interests can be seen as subordinate; in other words a trade-off between the different interests has to be made.[140]

The second important factor for the size of win sets is the domestic political institutions. In example is the win set diminished if a high majority in a national parliament is needed for ratification of an agreement, or if an extensive separation of political powers among the institutions of a country exists (as e.g. in Germany), whereas the bargaining power of the country in the international negotiations is increased (the small negotiating room

[136]Ibid. p.438
[137]Ibid. p.438-439
[138]Ibid. p.442-443
[139]Ibid. p.445
[140]Ibid. p.446

will be brought up).[141] Putnam further develops the hypothesis, that "the greater the autonomy of central decision-makers from their Level II constituents, the larger their win-set and thus the greater the likelihood of [...] agreement."[142] Regarding the governing parties Putnam claims that a highly disciplined government party increases the size of the win set, as the negotiating leadership can be sure to find acceptance for a wide range of possible outcomes. However, it is also concluded, that the higher the autonomy of a leadership from internal pressure the greater becomes the risk of weakening the own bargaining position internationally, as it will not be able to declare that a possible agreement is unacceptable because of domestic pressures;[143] the latter is especially important for a distinct application of this theory on democratic and autocratic states.

The third factor that influences the size of win sets is the strategies and motives of the leadership at level one negotiations (the chief negotiator). According to Putnam the negotiating persons are the only links between level one and two, and therefore are tempted to use this powerful position for their own interests. In this paper 'the chief negotiator' shall be identified with the head of government of the analyzed states, as in climate issues it is almost exclusively the heads of states that finally bargain about new agreements.[144] According to Putnam a chief negotiator has three main motives: First he will seek to enhance his standing on level two by delivering agreements that increase his political resources. The second motive is to shift "the balance of power at Level II in favor of domestic policies that he prefers for exogenous reasons."[145] The third motivation of a chief negotiator is his wish to put the perceived interests of the own country through. Putnam argues that it is reasonable to assume that a state leader will normally prioritize the first of these motives, often because the own incumbency depends on support from the domestic constituency. As a result, a state leaser will rather agree to a proposal on level one, if he sees positive consequences for his own standing at level two. A state leader on ground of his position between the levels is to be interpreted as 'a veto power', as the leader can block an agreement even if it lies inside of the win set of the own country; this is likely to happen if such an agreement would harm the position of the leader domestically, or because of the mentioned ideological or perceived national interests.[146]

[141] Ibid. p.448
[142] Ibid. p.449
[143] Ibid.
[144] Der Spiegel 2010
[145] Putnam 1988 p.457
[146] Ibid.p.456-457

4 Analysis

4.1 China

4.1.1 Development concerns blocking CP

No problem awareness in the past

The Chinese government blocked all forms of environmental protection and CP in the past. The prevalent attitude was: The need for development in the center of all politics, and no space for environmental concerns. One could e.g. read in a German newspaper in 1994 that Chinese businessmen and managers of energy supply praised their method of a quick development on ground of burning coal in extremely inefficient and polluting coal power-plants without bad conscience; the fact that coal is a limited and polluting resource had not gained awareness yet.[147] It was exactly this attitude that paved the way for the large scale destruction of the Chinese environment and the strong increase of GHG emission in the last decades. China's per capita emissions doubled between 1990 and 2005 and from 2001 onwards the rapid growth of the country "was accompanied by a huge expansion in energy intensive industries."[148] Climate emissions were and are caused by the expansion of the industry, the traffic and the energy generation, all caused by the rapid economic growth of the country. Energy is further not used efficiently in China; a lot of energy is wasted in the industrial production and a large amount of emission is produced in relation to the outputs; between 2001 and 2005 the growth of energy usage even outgrew the economic growth of the country.[149] The environment of the whole country thus finds itself in a devastating state: One fourth of the Chinese population is cut off from clean drinking water, a third of China's territory is hit by acid rain, one third of city dwellers breathe highly polluted air, desertification has reached a rapid speed and up to 70% of China's water bodies are highly polluted.[150] It is estimated that every year around 750.000 Chinese die of the consequences of environmental pollution.[151]

[147] Thielke 1994
[148] Freeman/Holslag 2009 p.5
[149] Sternfeld/von Waldersee 2005 p.60-61;Friedman 2009 p.405;Freeman/Holslag 2009 p.6,24
[150] Sternfeld/von Waldersee 2005 p.52-55;Stumbaum 2008 p.49-50
[151] Stumbaum 2008 p.50

Chinese Worker

Development at center of national politics

The reason for development as the (almost) single end of politics in China has a reason: the poverty in the country is still enormous, despite the big success in poverty reduction in the past decades were in 2006 still 36% of the population living from less than 2$ a day, 16% were living from less than 1.25$ a day, especially in the countryside the poverty is still enormous.[152] If this vast amount of people is not brought out of poverty quickly, these people will either immigrate to the big cities and thus will worsen the problems of China's metropolises or will even start to oppose the government. Such a development is possible in China as the big majority of the population is not convinced of the official communistic doctrine of the state any more; the relationship of the Chinese people with its political leaders is rather to be described as a pragmatic one: the population is satisfied as long as it is perceived that the government delivers improvement in the daily life for the majority of the population.[153] This pragmatic relationship stems from the opening of China to the West under the leadership of Deng Xiaoping in the 1980s; cultural western influences in combination with the possibilities to found companies and to become rich lead to a much more pragmatic and ideology free attitude of the population.[154] Even if many people so far have not benefitted from the government's policies, they have the perception that the big picture is changing to the better and that they themselves could be the next that are able to improve their

[152]UNDP 2008 p.34-36
[153]Suisheng 2005 p.25;Friedman 2009 p.422-423;Stumbaum 2008 p.49;Fischermann et al. 2010 p.3
[154]Dreyer 2004 p.111;Kwong 1994 p.247

own situation. The latter attitude is especially generated by the fact that the government is extensively investing in the work education of its young population (as up to 70% of graduates from secondary schools enroll at universities), giving also children from poor families the chance to achieve higher positions.[155] Therefore these still poor citizens stay loyal with the government as long as they can detect a big and positive economic change that will possibly include themselves (or their children) one day.

To uphold the hope for personal improvement the government needs to hold the economic growth of the whole country up, only in that way more people will one day be able to realize their dream of a better house, a better job and to maybe own a car.[156] Otherwise, the government will risk that the population will cancel the pragmatic agreement with its leadership and will start to rebel against the harsh work conditions, the destruction of the environment and the surveillance and terror of the leadership against any kind of open opposition.[157] A current example for such upheavals are the strikes in the factories of Honda, Hyundai and KYE Systems in Beijing, Houjie and Zhongshang, where workers demanded a better pay and a better living situation (Honda paid e.g. in its factories only the minimum wage of less than 150$ per month).[158] Now, it is estimated that China has to hold its yearly growth over a rate of 8% of GDP to be sure that the population will not give up its loyalty to the government.[159]

Workers protesting for better loan at the factory of the Taiwanese company KOK in Kunshan

[155]Zhang 2010
[156]Scholz 2010
[157]Fischermann et al. 2010 p.3; Freeman/Holslag 2009 p.12
[158]Lorenz 2010
[159]Friedman 2009 p.400-401;Kent 2005 p.23;Wan 2001 p.36

CC has gained awareness, first CP efforts initiated

Whereas CC was not acknowledged as a human made problem and CP completely blocked by the political elite in the past, has this picture changed to a certain degree in the last decade. The issue of CC has gained attention and ranks now higher on the political agenda of the country. It has become clear for many Chinese political leaders that CC itself endangers energy and food security and other prerequisites for potential further development.[160] CC e.g. would decrease the yield of China's major crops (rice, corn, wheat) by 37% in the second half of this century if the phenomenon stays unchecked. The agricultural problems that CC will bring in China were directly addressed by Xie Zhenhua, vice-chairman of the NDRC.[161] Energy security is endangered by CC as the mentioned projected water scarcity in China's main rivers (see Introduction) would decrease the potential of hydro-power immensely. Further could some of the projected flooding hit sites of important energy generation. These dangers have come to the conscience of policy planners in Beijing.[162] As Hu Jintao said at the G8-summit in 2007: "Climate change is an environmental issue, but principly it is an issue of development policy."[163] The government in China is thus under strong pressure to continue the current course of rapid and extensive growth and at the same time to ensure energy and food security.

And indeed first steps in a direction that could be described as CP measures have been made in the nearest past: the 11th Five Year Plan (2006-2010) contained plans to reduce energy intensity per unit GDP by 20%, and to increase the amount of sustainably generated energy.[164] Further were new laws setting basic principles on recycling or fuel standards passed in 2008,[165] and the government invested in the development of new renewable energy sources.[166] Larger circles of the political elite of the country have become aware of the problem as a statement of the Mayor of Dalian, Xia Deren, showed in 2007: "The biggest challenge [...] is to balance economic growth with the energy needs and environment."[167] Clean technologies shall deliver 15% of the consumed energy by 2020 and this sector indeed shows a rapid growth. The producers of solar cells or wind energy see a strong growth and are only predicted to further grow immensely.[168] Yet should be noted that also nuclear power is defined as CP measure,[169] this stands in opposition to my definition of CP (chapter 2.4).

---

[160]Smith/Lennon 2008 p.205;Freeman/Holslag 2009 p.2
[161]McDonell 2010;Smith/Lennon 2008 p.206
[162]Friedman 2009 p.406
[163]Hu Jintao after Sternfeld/Oberheitmann 2009 p.27
[164]Freeman/Holslag 2009 p.11;Friedman 2009 p.406-411;Stumbaum 2008 p.51
[165]Freeman/Holslag 2009 p.16-17
[166]Sternfeld/Oberheitmann 2009 p.32
[167]Friedman 2009 p.417
[168]Friedman 2009 p.417-420;Freeman/Holslag 2009 p.23
[169]Sternfeld/Oberheitmann 2009 p.30;Freeman/Holslag 2009 p.19-21

Reasons for the still devastating climate record

However, despite the described rise of CP on the political agenda and the introduced CP measures are the climate emissions reaching new record highs every year. China has overtaken the status as the world's biggest climate polluter in 2007.[170] China's CO^2 emissions have doubled in the last nine years and have increased to 8.1 billion tons in 2009.[171] The CO^2 emission increase in 2009 lay at another 9%.[172] And according to projections from 2007 is China also not on the way to accomplish its aim of reducing its climate emissions in a five-year timeframe by 10% until the end of 2010.[173] Especially the emissions of the export industry grew in the last decade, this being the sector that is responsible for most of China's growth impulses.[174] Further has the energy efficiency not been improved sufficiently: from 2006 until 2009 an improvement of only 13.7% had been achieved, instead of the planned 16% (4% each year to reach the aim of a 20% higher efficiency).[175] And adding up the development of energy efficiency of the last decade, one comes to the conclusion that the energy efficiency of China's industrial production as a net result worsened and not improved in this timeframe. In absolute terms is the energy consumption of the country still increasing immensely every year. China is currently increasing its energy consumption by 15% a year[176] and China's overall energy consumption has increased by 70% since 1990.[177] This resulted in the fact that China in 2009 replaced the US as world's biggest energy consumer, after the US had held this 'title' for almost 100 years.[178]

These numbers make it hard to believe that CP really has gained priority over development concerns in China. One will, looking at the following arguments, rather have to conclude that CP is in effect still more blocked than pushed by the political elite in China. First of all appears the amount of money that is invested in renewable energy development and research tiny: e.g. were in 2006 only 32 million $ invested for this purpose.[179] This number appears negligible in relation to other investments (e.g. the investments in the business cycle after the world economy crisis). The marginal funding of these measures indicates that they were possibly only launched due to publicity reasons. And the growth of solar and wind energy had as seen no effect on the ongoing emission growth. Renewable energy is still so small in China, that it will take many years

[170]Giddens 2009 p.183
[171]Olivier/Peters 2010 p.6
[172]Vidal 2010 p.2
[173]Der Spiegel 2007
[174]Friedman 2009 p.405;Freeman/Holslag 2009 p.6-7,24
[175]Freeman/Holslag 2009 p.19;Friedman 2009 p.408
[176]Friedman 2009 p.412
[177]Stumbaum 2008 p.49
[178]Die Zeit 2010 p.1
[179]Sternfeld/Oberheitmann 2009 p.32

until this technology can have a significant impact.[180] The latter can be proven by the fact that only one of the ten biggest energy companies produces slightly more than 3% renewable energy.[181] By contrast is the usage of coal for energy production increasing further, it is projected that China will go on to increase the burning of this resource by in average 2.6% yearly until 2035.[182]

Second, has until today no major governor or industry manager been sacked for not fulfilling the mentioned goals on energy efficiency or climate emissions. In contrast showed a 2007 survey that 90% of mayors in the Shanxi province (a highly polluted province) feared for development if CP measures were taken serious, e.g. by closing all highly polluting factories.[183] But suspensions of high officials would clearly lie within the realms of possibility for the Chinese administration. The Chinese state organs have not only a large influence on the regional politicians such as the governors (through the Communist party and rigid legal methods) but still a large influence on domestic corporations as well. The state owns many of the biggest Chinese companies and further actively directs the economy through a very strong economic policy line.[184] An institution with major influence is here the NDRC, "China's most important economic planning body."[185]

Third, due to the fact that many big companies in China are state owned one can further conclude that the administration could manage to improve energy efficiency and to diminish climate emissions quicker and to a greater extend among all these state owned enterprises, if CP really had priority. However, is it to detect that CP is not taking place at all or only to a very insufficient amount among all the important companies the Chinese state owns or is able to direct. In example is the Chinese cement industry (in which the largest enterprises are state-owned and the smaller ones state directed) alone responsible for at least 2.5% of the world's CO^2 emissions, and due to its dirty production measures for more than 50% of all emissions coming from this kind of industry worldwide.[186] Another example is that the ten biggest energy companies in China (all state owned) still produce enormous amounts of CO^2, in 2008 the burning of these 10 top companies amounted to 1.44 billion tons of CO^2, and alone the top three power companies emitted more GHG than the entire UK in the same year. And as mentioned produces only one of these 10 biggest Chinese energy companies more than

[180]Vidal 2010 p.2
[181]Greenpeace 2009 VI
[182]Die Zeit 2010 p.2
[183]Lim 2007 p.3
[184]Freeman/Holslag 2009 p.15;Smith/Lennon 2008 p.207;Fischermann et al. 2010 p.4
[185]Freeman/Holslag 2009 p.18
[186]Herzog/Dooley 2010

3% renewable energy from non-hydro-sources, 8 out of 10 were at less than 1.5%. Almost needless to say that the efficiency of these power companies was lower when burning coal than in developed countries. Characteristic for the government's low priority on total emission reduction is that all these 10 companies with their low efficiency and their low amount of renewable energy met the governmental aim of reducing the average coal consumption. This shows that the political leadership is content with only marginal improvements.[187] Further are also several of China's biggest car companies state owned (e.g. Dongfeng or Chery Automobile), their amount of sold cars with renewable drive system is not significantly higher as this is the case for most other car companies in the world; focus is rather on join-ventures with American and European car producers.[188] The examples cover all those fields in the Chinese economy that are responsible for most of China's climate emissions (industry, traffic and energy generation); therefore one can justifiably argue that the Chinese administration is doing way to little in its own circle of influence to reduce GHG emissions; a strong indication that this issue is not enjoying priority. As almost all big Chinese corporations that operate in the mentioned fields that are responsible for most of China's climate emissions, are state-owned, an analysis of the possible impact of private Chinese entrepreneurs due to private profit-interests shall not be carried out. The government is as explained the key actor in China when it comes to climate emissions (apart from foreign corporations that are integrated in 4.1.3).

That the Chinese climate measures are limited to the energy sector is the fourth argument that shows that CP is not enjoying priority.[189] This attitude was also mirrored in the COP15 negotiations where the Chinese leadership was only eager to deliver promises concerning energy efficiency.[190] By comparing some of the already delivered numbers it can be seen that the established measures on energy efficiency are not sufficient to have a decisive impact on CP. According to the Five-Year-Plan energy efficiency shall be improved by 4% per year, nevertheless is the energy consumption of the country currently increasing by 15% per year. Therefore would a fulfilling of the efficiency aims not deliver a sufficient solution in regard to CC. In contrast are there many other areas where the leadership would have to find quick solutions and improvements in regard to possible caused emissions, e.g. is the car traffic projected to increase immensely in the next decades, some sources speak of an increase of 1000% until 2030, taken from a 2005 basis. And already are the Chinese buying more cars than the Americans.[191] And also in the field of energy generation a solution away from carbon burning would have to be found to come near a sufficient CP.

[187] Greenpeace 2009 VI;Greenpeace 2009 V p.2-6
[188] Simpkins 2009;Chinacartimes.com 2009;Fischermann et al. 2010 p.4
[189] Smith/Lennon 2008 p.207
[190] more on this in 4.1.3
[191] Lim 2007 p.2-3;Scholz 2010 p.1

In order to stay fair should it be mentioned that even if CP gained priority among the Chinese leadership, would it be difficult to achieve sufficient results in a short period of time. First of all is apart from all discussion about energy efficiency the dominance of carbon resources such as coal and oil extremely big. In such a big country as China would it be everything but easy to break this big dominance to a sufficient degree in the needed (rather) short time.[192] Especially since the large investments in coal generated energy of the last decades have brought the phenomena of a so-called 'carbon lock-in', which means that the energy decisions made in the past are continuing to bring negative consequences (carbon emissions) in the future;[193] a classical example of path dependency. Following that and in line with Freeman/Holslag can it be claimed that carbon emissions in China could "grow for several decades."[194] Still has especially China shown in the past of what astonishing, extreme and quick changes it is capable if all force and will of the people and leadership is brought in the game. China's growth is still so big (another 10% this year)[195] that the country could cope with a little less growth in order to protect the climate.

The limitation of the Chinese efforts on energy efficiency shows where the priority of the administration really lies: at energy security, due to its importance for development, growth and political stability; the reduction of GHG emissions is thus not a priority.[196] This claim is justified by the following considerations: The current quick development endangers the energy supply of a huge amount of Chinese. If ever more Chinese get wealthier and if industrialization and urbanization in China continue (around 300 million people are predicted to move in the next decades)[197] ever more energy will be demanded; but the Chinese energy resources are not big enough to supply all of its population with the necessary amount of energy, on such new standards.[198] The leadership would "not be able to deliver [...] the rising standard of living it has promised."[199] Such a possible lack of energy brings dangers for the government: The economy might lose its growth momentum; in face of this more people could start to oppose the government, as many poor citizens would perceive their chances for

[192]Sternfeld/Oberheitmann 2009 p.30;Friedman 2009 p.406-407
[193]Freeman/Holslag 2009 p.20
[194]Ibid. p.7
[195]Fischermann et al. 2010 p.1
[196]Freeman/Holslag 2009 p.15,28;Smith/Lennon 2008 p.205-207
[197]Freeman/Holslag 2009 p.14;Friedman 2009 p.420;Evans 2009 p.2
[198]Lim 2007 p.3;Freeman/Holslag 2009 p.8;Friedman 2009 p.410
[199]Friedman 2009 p.399

personal development diminished.[200] The government is thus seeking to prevent such dangers of shrinking loyalty and upheavals by improving energy sufficiency. This strongly indicates that the government is predominantly interested in preserving stability.[201]

The preferences of the Chinese leadership are shaped according to the mechanisms explained in chapter 3.3 on liberalism: Energy security shall be delivered as this is crucial for economic development, which is demanded by a majority of the society. This influential 'demand input' lies within the process that leads from development concerns to an insufficient coverage of the CC issue: Development is at the center of the government's focus, and as energy security is crucial for further development is the government limiting its efforts on this area, the motivation for a more efficient energy production does thus not stem from CC concerns.[202] However are these efforts labeled as CP by the government in international negotiations as will be seen in 4.1.3. If once the needed energy security would be delivered it is to project that the Chinese government will drop its efficiency program, without taking notice of the CC issue any more, whether sufficient progress concerning CP has been achieved or not. That development has still the priority over CP is according to the explained liberal mechanism also a consequence of lacking pressure from within the population. Why no such pressure evolves shall be the topic of the next chapter.

[200] Freeman/Holslag 2009 p.12
[201] Smith/Lennon 2008 p.206
[202] Ibid. p.206

4.1.2 Population not pressing for CP

Influencing the government is possible for population in China as well

In the previous chapter it was argued that the government put development in the center of its politics due to the fear of upheavals among the population. Therefore it can be claimed that the population is indirectly pressuring for development.

One could come to wonder about the importance of the populations' attitude and with that about the possibility of the population to influence government politics in a clearly autocratic country such as China. But, although China is still an autocracy with a devastating record concerning democracy and human rights, and although free elections are just as well not to be found as a flourishing landscape of NGO's freely led by citizens,[203] is the public opinion in the country still important as can be seen with the following: The government has to respond to the demands of people from very different social stratums: the poor and the nationalists to name the most important groups. If the broad and to a big part still poor public is cut off from further development, an end of the loyalty of this big group or even upheavals are risked; this would bring the government in danger of losing its power. The support of the nationalists would be endangered if the government ended its course of achieving a new powerful China that outshines the defeats of the country during the 20th century. This new 'greatness' can only be achieved by increasing the power capability (see chapter 3.1) of economic growth and economic influence.[204]

Reasons for not delivered pressure

Whereas it was seen above that some big groups influence the government towards putting development into the center of politics, the same can not be concluded when it comes to CP. Several reasons provide for this result, they shall be explained in the following. Both, the awareness of the population of CC and the importance of the same for the Chinese are in average not high enough so as to cause a bigger pressuring for CP measures. First is the overall awareness of CC with 59% significantly lying under the awareness level of other developing nations, e.g. Brazil with 75%.[205] The awareness of the Chinese living in the rural areas of the country is especially low; here only half of the people are aware of the problem.[206] This is of special importance in case of China as still

[203] Freedomhouse 2010a
[204] Suisheng 2005 p.30
[205] Gallup 2010
[206] Gallup 2009a

two of three Chinese live in rural areas, which is more than in most other countries.[207] The awareness of the problem additionally decreased (or at least not increased, due to the standard error) from 2009 to 2010 as according to Gallup 62% were aware of CC in 2009.[208] Further are also only 58% of the Chinese convinced that CC is a man-made problem.[209] The latter could be influenced by a skeptical rhetoric of the government in relation to CC; e.g. expressed Xie Zhenhua the vice-chairman of the NDRC his doubts concerning the theory that mankind is the trigger for CC. He claimed that the Chinese leadership has an 'open attitude' when it comes to the cause of CC.[210]

Second is it to say that there is not a big enough amount of people that perceive CC as a very serious threat for their personal life and the country's fate. Only 28% of the asked in a 2009 World Bank poll (including the rural population) believed that CC is a serious threat. This was the lowest number among 12 developing nations, and this despite a biased question in favor of showing concern.[211] A Gallup poll from 2009 found that only 21% of the Chinese evaluated CC as serious personal threat.[212] This low overall evaluation of CC seriousness is most probably strongly influenced by the fact that information on CC is strongly influenced by the government in the autocratic country.[213]

Third is the population in China content with the policy of the government regarding CC, 86% of the asked expressed such an opinion in a 2010 Reuters poll.[214] On ground of the fact that the government's policy regarding CC is everything else than satisfactory, as was explained in the last chapter, it is very likely that the described information control lead to such an attitude among the Chinese population. A government that almost totally controls all media sources in its country can easily create the impression among its citizens that it is dealing with the problem in an adequate and satisfying manner. Considering the fact that many Chinese do not perceive CC as serious threat and are at the same time content with the government's policy line on the issue, it is easy to understand why not much open protest against the lacking CP in the country is to be found.

[207] Scholz 2010 p.1
[208] Gallup 2009a
[209] Gallup 2009b
[210] Nelson 2010
[211] Worldbank 2009 III p.4,38
[212] Gallup 2009a
[213] Rsf 2009
[214] Reuters 2010

The harsh reactions of the autocratic regime on any kind of open opposition plays a role as well when it comes to this missing protest. The Chinese system is not leaving space for any kind of movement that is not approved by the leadership. Many examples from past and present can be found which show that the Chinese regime is one of the most oppressive when it comes to dissidents; examples range from the Tiananmen incident 1989 to the actual statistics of AI which show that China is one of the most brutal countries in the world when it comes to the treatment of oppositionists and dissidents.[215] Not many people will be eager to protest against the government's policy if they risk to be tortured, sentenced to imprisonment or even the death penalty. Such risks are most probably only taken for issues that are directly connected to the own fate, to come out of poverty is such an issue, the (for many people) abstract topic of CC is rather not an issue that people would take such big risks for. Especially since half of the population is not even convinced that a large scale environmental campaign could make a significant difference in regard to CP.[216] Recent examples for upheavals that found their reason in protest against harsh living conditions were delivered earlier (Honda, Hyundai and KYE Systems). Another historical example is again the protest culminating in the Tiananmen massacre; especially the workers under the protestors were motivated by a worsening economic situation.[217] The abstract nature of the CC issue and the poorly evaluated success-prospects of a hypothetical CP campaign are thus further reasons for why the Chinese population is not pressing its government to more CP. Putnam's theory supports this interpretation, as it argues that free action of interest groups, free public discussion and protest measures are much rather to be found in democratic societies (see chapter 3.4).

Whereas the former arguments showed that the Chinese are not triggering CP, the following explanation will show that the step out of poverty that many millions of Chinese did in the last decades even worsens the chances for CP, domestically and worldwide. New patterns of consumption in China are worsening CC, both directly and indirectly. Patterns of consumption that directly fuel CC are e.g. the increased purchase and use of private cars, fridges, televisions and air conditioners. The purchase of such goods is also a consequence of the ongoing urbanization of the country and is therefore only going to grow in the future.[218] A changed pattern of consumption that contributes indirectly to CC is the strongly increased amount of dairy products and beef consumed in Chinese households; as people become richer they are eager to consume the more expensive milk and beef instead of water and pork. The urban population in China

[215]AI 2009;Schrecker 2004 p.236-238
[216]Friedman 2009 p. 416
[217]Schrecker 2004 p.236-238
[218]Friedman 2009 p.420;Freeman/Holslag 2009 p.14

increased its consumption of dairy products by 300% and doubled its meat consumption between 1990 and 2006.[219] The cows that are needed for the mentioned production now directly contribute to CC through their evaporation, and further will be more beef and soy imported since China is a net-importer of these goods.[220] The latter means that the demand for cattle and soy production in countries such as Brazil grows ever more, with devastating results as will be described in the following part on Brazil.

Population not with neorealistic, but development focused attitude

Not responsible for the non-deliverance of CP pressure is according to the following numbers the widespread Chinese nationalism. This nationalism has its source in the humiliations that the country and its population had to suffer in the past two centuries.[221] Then China had been rather powerless and was in the eyes of many Chinese humiliated, first by the Western powers, than by the Japanese.[222] These negative experiences caused a desire to improve China's global role in the anarchic international system, and as seen is China's arsenal of power capabilities well-stocked and its prospects for a rise to the world's next superpower are more than good. However, different than one might consider at first glance is this nationalism not blocking cooperation with other nations concerning CP. First, expressed in the mentioned World Bank poll 98% of the asked that China should bear an international responsibility when it comes to CC. Further stated 96% of the asked in the same poll that China should contribute to GHG reduction if the other nations came to an agreement at COP15.[223] These numbers clearly speak against a neorealist interpretation of the public's attitude in China: It is not possible to claim that for the majority of the population the relative gain of China is the most important. This is further supported by the fact that 89% of the Chinese stated that China should help poorer nations to deal with climate-induced changes,[224] and additionally were in a Gallup poll only 26% of the population of the opinion that the developed countries necessarily should move first, 44% voted for actions of both, developed and developing nations, at the same time.[225]

[219]Evans 2009 p.2
[220]Ibid. p.3, 5
[221]Suisheng 2005 p.24-26
[222]Lowe 2005 p.70-72;405-406
[223]World Bank 2009d p.9,12
[224]Ibid. p.17
[225]Gallup 2010

Considering the given explanations one can draw the conclusion that also among the population development obtains priority over CP. This view is supported by a result of the mentioned World Bank poll that found that only 38% of the asked Chinese wanted priority for CP, also if this would diminish development chances.[226] As a developing country that has undergone big changes in the last decades, everybody is naturally very aware of the development topic, in contrast to CP as seen earlier. One could say with Friedman that the national identity of the Chinese is closely tied with economic growth and a general modernization and rise of the country as a whole.[227] An identity concerning CP is thus not to be found yet. Further is poverty easier to detect as a national problem than a too high amount of GHG for the average (and especially on the countryside often uneducated) citizen. Everybody is able to see in everyday life if a big share of the population shares the own fate of being poor, whereas it is not that easy to inform oneself about the overall emissions of the industry or traffic. Due to that the government is also not able to keep such a tight control over information concerning development than this is the case with CC information. In the big wandering of ruralists to the big cities due to hopes for a better (and wealthier) life one can see another indication for the transparency of poverty.

However, it should be mentioned that one is coming by contradictory (and seemingly contradictory) results when trying to gain an overview over the Chinese' attitudes towards CC. In example came some polls to the results that a big share of Chinese (77%) wishes for more action of their government concerning CC,[228] whereas other polls did not find such a big craving for more government action among the Chinese population: e.g. found a 2010 Gallup poll that only 48% of the population thought that the government was not doing enough.[229] The first of these results would contradict the earlier delivered argument that the population is very content with the government's CC policy. The second result then rather backs this argumentation. In this concrete case (and in other possible cases) the big majority of detected numbers in the researched polls delivered support for the above-mentioned argumentation.

Finally it is to conclude that the Chinese population is not ready for a movement pressing for CP yet. Large parts of the population are either not aware of the CC problem or not convinced that it is a serious issue. Further are most people satisfied with the government's policy on CC and additionally would most people anyway not risk to openly oppose the regime. The new wealth of some parts of the population rather worsens the CC problem.

[226] World Bank 2009d p.5
[227] Friedman 2009 p.422-423
[228] World Bank 2009d p.10
[229] Gallup 2010

4.1.3 International business interdependencies and neorealistic politics blocking CP in China

Outsourcing bringing extra emissions

The first major external issue blocking CP in China that shall be explained here is the so-called 'outsourcing' of emissions to China from already developed countries. Those Western corporations that move their industrial production to China bring a large amount of 'extra'-emissions on the Chinese record. According to the newest data are around a third of all Chinese CO^2 emissions (in total numbers 1.7 billion tons of CO^2) the result of production for export.[230] Alone 9% of all Chinese GHG emissions are the result of export to the US, and another 6% of export to Europe.[231] Examples for international corporations producing products and GHG emissions in China are the electronics industry, automobile suppliers, the clothing industry, furniture manufacturing and all kinds of manufacturing in general.[232] Due to the low energy efficiency in China the same goods are produced with causing more emissions, e.g. is the production of a computer causing three times more emissions when produced in China instead of the US.[233]Therefore the corporations and consumers in developed countries bear responsibility as well. As the producers are trying to maximize their profits with moving to China, it is clear that only the cheapest possible production is acceptable for these companies, as can be seen in the fact that also the paid loans are extremely small.[234] The latter being the main reason for the outsourcing of the production in first place.[235] On ground of that one can deduct that this attitude stands clearly in the way of CP; the measures that would be necessary to make this outsourced production climate friendly – e.g. the production with modern exhaust gas filters or CO^2-free energy - would make the production more expensive. Every CEO calculates therefore according to the collective action problem: if my company agrees on climate friendly production it is rational for the other companies to defect and to continue to produce by climate aggressive means. Therefore a climate friendly production is not provided from the side of the international corporations. An actual example for such calculations is delivered by IKEA. The Swedish company maintained in 2006 around 100 furniture factories in China, where a quarter of the company's global stock was produced.[236] Many sources now

[230]Clark 2009 p.1;Mc Dermott 2008;Pasternack 2009 p.1
[231]Clark 2009 p.1;Pasternack 2009 p.1
[232]McDermott 2008;Spencer 2007;Kamp 2009;Goodman/Finn 2007 p.1
[233]Spencer 2007
[234]Lorenz 2010
[235]Spencer 2007
[236]Goodman/Finn 2007 p.2

report about illegally logged wood being used in these factories, still are only 2 foresters with the task to control the origin of the used wood on IKEA's payroll in China. Thomas Bergmark, global manager for social and environmental affairs openly admits that this lack of control is caused by cost reasons: "It's about cost. […] It would take enormous resources if we trace back […] every wood supply chain"[237]; an attitude that appears cynical considering IKEA's world-wide dominance on the furniture market and the status of its owner as one of the world's richest men.

The same way of thinking can be suggested to dominate the thinking of the Chinese political leadership. If certain laws were brought in force that bound the international corporations to produce climate friendly, it would be rational for these companies to move to other countries where such laws are not in force ('free-rider-countries'); with that the jobs and economical development that the engagement of the international corporations brought would be lost and the national development (which is as seen a priority) would be in danger. Therefore Chinese policymakers will shrink back from such a step and will not provide such a climate friendly legal and political framework for international business activities; in Olson's words becomes China a free-rider oneself.
This process of emission outsourcing fuels the conflict about international fairness in the CC phenomenon. The Chinese leadership (as other governments from developing countries) argues that rich countries would first outsource their production to poor countries and would then start to blame the developing nations for their increasing emission. As Qin Gang, the spokesman of China's foreign ministry said in 2007: "On the one hand, you increase production in China; on the other hand you criticize China on the emission reduction issue."[238] Interestingly the dependency of Greenpeace in China argues in a similar way.[239] However, it is important to bear in mind that there is a cooperation between corporations of rich and poor countries taking place (e.g. the mentioned joint-ventures in the car industry)[240] and further were and are most governments of developing countries, and foremost the Chinese, more than willing to let this foreign production unfold itself in the country as it fuels economic growth, brings jobs and technological know-how.[241] China even established the so-called 'special economic areas' to bring international production to China[242] and is advertising for investments in its country, e.g. is it mentioned on the webpage of the Chinese embassy in Germany how successful German companies are in China.[243] The Chinese leadership had thus 'constructed a coalition' (Putnam, chapter 3.4) with these industries. And

[237]Ibid. p.3
[238]Mongabay 2007
[239]Earth Talk 2009
[240]Simpkins 2009
[241]Pasternack 2009 p.2
[242]Ota 2003 p.22-23
[243]China-botschaft.de 2004

China itself is now massively buying up primary goods (e.g. wood) to process them in the own country, that means that China is acting according to the same mechanism that it is criticizing itself.[244] To say that the problem of emission-outsourcing is only the fault of 'the West' is therefore hypocritical, the Chinese leadership was very motivated to bring this production in, as it supports the own development. Therefore the West and the Chinese are both responsible for the appearance of outsourced emissions. Until now the argument is thus instrumentialized by the Chinese leadership to be able to justify defection concerning international agreements.[245] It is to say that permission for developing countries to not reduce emissions would fuel emission outsourcing even more; companies from all over the world would move their production to those countries where a production without expensive CP measures is still possible.[246]

The mentioned instrumentialization is an indication for a neorealistic political course of the government: The relative gain of the country is the most important, everything else secondary.

Neorealist Course of the Chinese Government blocking CP

The second major interdependence that blocks China from CP is the neorealist course of the leadership in the international arena. Such a neorealist course means that the Chinese government is not willing to agree on binding CP measures with other countries, and does also not want to carry out sufficient CP measures by itself. The leadership is instead speculating for the own relative advantage if everything proceeds as normal. This course is fuelled by the cravings for development among the population. This desire for development of the Chinese people lets the government follow a political course that is seeking to secure China's rise to one of the leading economies in the world despite the problem of CC; or expressed in the style of neorealism: China is seeking to improve its position in the anarchic international system, thus ignoring CP. The Chinese leadership is now trying to deliver on the pressure for economic development with a clear cut neorealistic course on the CP issue; although as explained (4.1.2) the population is actually not in favor of a course that does not take the CP-relevant actions of other nations into account. As mentioned, preferred the Chinese people a course that puts priority on cooperation, given that the other nations were seeking such cooperation as well. But as argued in chapter 3.3 are governments only taking the preferences of the pressure group up, with which strategy these preferences shall be satisfied is decided irrespective of these groups. The preference of sustaining

[244]McDermott 2008;Pasternack 2009 p.1-2;Goodman/Finn 2007 p.3, 7
[245]Clark 2009 p.1;Pasternack 2009 p.1-2
[246]IISS 2010 p.1-2

the rapid development is then pursued by the government with a non-cooperative, neorealistic strategy on CP on the international level,[247] as this is the easiest way to secure this rapid development. This blocking of CP by the Chinese government could seem as a paradox, as it was described in the introduction, that the costs of the consequences of CC will outweigh the costs for mitigation of CC; and as the government knows that China is so crucial for CP that without own action the CC problem will not be solved. This prevents for the classic motivation of a free-rider, as there are no hopes that the common good of a sufficient CP can be delivered by other nations. That China is still acting as a free-rider can then only be explained by the high pressure for development the leadership is faced with. The government's calculation must be that it is more dangerous for the stability (and with that for the ongoing development) of the country (and the own power) to slow the economic growth a little in order to carry sufficient mitigation efforts out, than to be faced with the consequences of CC in some years time. This is (besides the to-be-delivered argument about sovereignty) the only rational explanation that is left when trying to analyze the behavior of the Chinese leadership in regard to CC. Due to the latter one can claim that Barnett was right with his claim that the positions of countries towards climate regimes are "the product of a two-level-game".[248] Any far reaching climate agreements going further than the mentioned efforts on energy efficiency (which are as seen highly development-relevant) would only harm China's development chances and with that its inner stability. The recently experienced global financial and economic crisis has ever sharpened the focus on development and its connected importance concerning stability and international status on the Chinese side and with that diminished the chances of receiving any concessions from China in the CC issue.[249]

An excellent example for this neorealistic politics that stands in the way of every international CP agreement is the political course of the Chinese delegation at the COP15 meeting. The hopes for this meeting were extremely high on the side of CP NGOs, but were not in the least fulfilled. The conference ended with the 'Copenhagen Accord' that was simply 'taken note of' by the state leaders from 193 countries.[250] Some of the broad aims that were as said taken note of were to let global emissions peak "as soon as possible", to make sure that emissions will stay below a level that causes a warming of more than 2C°, or an intensification of efforts to prevent emissions from deforestation; but neither names nor numbers were put on any of the points.[251] Chellaney therefore described the Accord as "face-saving agreement stitched together

[247]Lynas 2009 p.3
[248]Barnett 2007 p.1367
[249]Fischermann et al. 2010 p.6
[250]Hoste 2010 p.1;IISS 2010 p.1-2
[251]Copenhagen Accord

[...] to cover up the summit's failure."[252] China's Prime Minister Wen Jiabao was in contrast convinced that the Accord "was a result of hard work […] and should be treasured."[253] At COP15 China formed a new alliance of big developing countries that was called BASIC; its members were - besides China – South Africa, Brazil and India.[254] This new alliance surprised many observers, and according to reports at least parts of the EU and US delegations as well; e.g. is it reported that the US delegation was surprised to find all BASIC delegations in the meeting room when a meeting with only China had been arranged.[255] BASIC, with China as "primus inter pares"[256] took now a very strong line in the negotiations: Regardless of the economic situation did they not want any binding emission reduction aim for any developing nation. China further successfully prevented the inclusion of a target year for the stabilization of emission increase. The only concession China was willing to deliver was the inclusion of the aim of further improved energy efficiency (around 40%) in its next Five-Year-Plan.[257] A close monitoring and reporting on such improvements in China or other improvements in other developing countries was then again not meeting the consent of the Chinese delegation, as this would violate the country's national sovereignty.[258] China even sought to prevent that the developed nations wrote binding emission reduction numbers for themselves in the Accord, as Mark Lynas a member of the delegation of the Maldives reports.[259] In other words was China not only acting as a free-rider itself, but was also pressing everybody else to become a free-rider. This claim is hard to prove due to missing meeting minutes, thus sounds reasonable when he explains that China calculated that the developed countries would be accused harder than China for a non-deliverance of any concrete reduction-aims,[260] in other words intended China to deflect the blame on the US and the EU. China was in this course especially backed by India.[261] Also Müller-Kraenner speaks of that the EU and the US 'did not manage' to integrate their emissions reduction aims of 30% until 2020 on 1990 levels, and 3% on 1990 levels (17% on 2005 levels) until 2020, respectively, in the Accord in the negotiations with the Chinese.[262] This strongly indicates that Lynas correctly reports about the events in the meeting rooms.

[252]Chellaney 2010
[253]Hoste 2010 p.5
[254]IISS 2010 p.2;Müller-Kraenner 2010 p.2; Chellaney 2010
[255]IISS 2010 p.2;Goldenberg et al. 2009 p.2
[256]Müller-Kraenner 2010 p.2
[257]Ibid. p.1
[258]IISS 2010 p.2;Goldenberg et al. 2009 p.3
[259]Lynas 2009 p.2
[260]Ibid. p.1-2
[261]Ibid. p.2
[262]Müller-Kraenner 2010 p.1

The heads of state of the BASIC group at COP15

This negotiation line of China in the COP15 clearly speaks against the argument that the Chinese leadership is concerned about fairness in the climate issue, as it could have been deducted from the section about emission outsourcing or occasional Chinese claims that those countries that have caused most emissions in the past centuries should move first.[263] The reported negotiation line reflects neorealistic politics due to the following: Lynas cites a UK-based analyst who is of the opinion that China blocked a CP agreement to forego the risk of being "called on to be more ambitious in a few years' time".[264] This view is backed by a leaked Chinese document that predicts 'more difficult' future negotiations.[265] If China had not prevented concrete numbers in the Accord on the side of the developed countries as well, China might have been faced by strong pressure in a few years time to do the same. Although China is on the way to become a dominating superpower it is not there yet, the mentioned pressure might have grown too big and China would have had to concede concrete reduction aims in only a few years time, which would have brought the development aims in danger. That nobody had such concrete aims written in the agreement was therefore the most rational alternative for China. As China did not have anything to loose from its 'voluntary defection' at COP15, the Chinese 'win-set' (Putnam, chapter 3.4) for an agreement was indeed very small and did not include an agreement with concrete numbers for anybody.

[263]Smith/Lennon 2008 p.205;Earth Talk 2009
[264]Lynas 2009 p.3
[265]Watts 2010 p.1

In effect the BASIC group ended up to form the "strongest and most important group,"[266] and "succeeded in effectively pushing forward their interests" at COP15.[267] This incidentally falsifies the claim of Putnam, that the leaders with the weakest domestic position and the biggest domestic pressure would have an advantage at international negotiations: the leadership with the strongest domestic standing and the lowest domestic pressure (China) was also the strongest nation at the negotiations. The formulation of Müller-Kraenner shows that he interprets the events at COP15 as a neorealistic interest-seeking as well. Also Chellaney sees "all sorts of competing interests" detached to the climate talks.[268] Goldenberg et al. claim that Wen tried to "safeguard the country's economic future."[269] Wen Jiabao delivered further ammunition for this interpretation himself, as he said after the negotiations that "development is key to the climate talks."[270] Xie Zhenhua was in line with his Prime Minister, describing the CC issue as a contest for economic development space.[271] Therefore it can be argued that the Chinese leadership was at COP15 motivated due to Putnam's third category of motivation: the interests of the own state.

Although it should be clear that the big developing nations would not have been so successful at COP15 without China, it is to say that the support China received, especially from India, helped the country a lot. However, as Chellaney and Hoste argue is the BASIC alliance founded on political opportunism, and can thus be projected to ravel quickly, especially as the 'carbon profiles' of the countries (e.g. regarding the per-capita emissions) would be very different.[272] This projection fits with Waltz' claim that coalitions in the anarchic international system are doomed to not last for long.

In regard to the often used argument that the hesitance of the EU and especially the US concerning CP would hold big developing countries such as China, the following should be considered. Such an argument that builds on the theory of Olson (as all other actors are potential free-riders, no one can be trusted, the only rational alternative is to become a free-rider oneself) makes sense in theory, but not in practice any more. The EU did in reality offer a significant reduction to the other parties, in other words it did

[266] IISS 2010 p.2
[267] Müller-Kraenner 2010 p.2
[268] Chellaney 2010
[269] Goldenberg et al. 2009 p.3
[270] Hoste 2010 p.5
[271] Watts 2010 p.2
[272] Chellaney 2010;Hoste 2010 p.5

not defect and rather tried to build up some trust. The US came not forward with such big reduction aims (3% on a 1990 basis) but its attitude had changed drastically due to the change of the administration and it is reported that the US would have been eager to consent on higher own aims, had the BASIC alliance, and here especially China and India, been interested in putting concrete numbers on paper.[273] A role of hesitance can therefore not be concluded; neither for the EU, nor for the US, as the American delegation tried in contrast to earlier negotiations to conclude the conference with a concrete reduction aim. That everybody hoped "to get a free ride" [in the sense of Olson], or "to shift their burden on to other nations"[274] can thus not be concluded for the EU and the US, applied on China, India or Brazil, this conclusion would look different. A possible reason for this willingness on the EU (and US) side to come forward with concrete reduction numbers is the gain of possible 'selective incentives', in case of a climate agreement; such incentives could be a possible 'green image' or to gain domestic support from citizens holding a positive attitude towards CP.

[273]Goldenberg et al. 2009 p.1;Lynas 2009 p.1
[274]Gang 2007 p.528

Sovereignty concerns blocking CP agreements

It can be argued that the fear of the Chinese leadership of a loss of sovereignty is an additional issue that blocks CP in China. As mentioned, argued the Chinese delegation at COP15 that a close monitoring of CP measures would be unacceptable as this would be a severe violation of the national sovereignty.[275] Whereas it was argued in the previous section – and this claim shall sustain its primary status – that China acted in this way due to development and stability concerns in COP15, there are hints that in this particular issue the Chinese leadership perceives a fear for the sovereignty of its system (and with that for its own power) that lets it shrink back from every international agreement that brings only the slightest risk of a violation of this national sovereignty. Chinese officials always set great value on safeguarding the national sovereignty[276] which is another cause of the humiliations of the 20th century.

An opening of China to certain controls on one issue (here CC) could bring the risk for the leadership to be pressed for such opening on other issues as well (e.g. human rights, democracy, work conditions or 'simply' a monitoring of an international tax). In any case would the bargaining position for other negotiations be declined.[277] China will probably never accept such tries of other states or the international community to closely monitor processes inside its borders and to be told of these actors what to do and what not.[278] This as in - for the leadership - worst case, the population could become aware of such increased international control of the own government on the CC issue and might start to press from the inside of the country (in the way explained in the liberalism chapter) for more monitoring on other fields as well. In combination, such a situation could – following the logic of liberal theory - bring the leadership in danger of losing its power, or at least bring necessities for reform that would decrease the leadership's power. The leadership would find some of its 'constructed coalitions' (see chapter 3.4) with big parts of the society destroyed and its power basis endangered.

[275] IISS 2010 p.2
[276] Kane 2005 p.23
[277] Ibid. p.18
[278] Lilley 2009

4.2 Brazil

4.2.1 Profit interests blocking CP

Importance of the rainforest

Other than in the case of China is in Brazil not the growth of the industry but the growth of the agricultural sector the major problem in regard to CC. Thus is the destruction of the rainforest the single biggest cause for climate emissions in Brazil, accounting for around 66-75% of the country's emissions.[279] The rainforest still covers around 60% (around 4.1 million sq km) of the Brazilian landmass and the Brazilian rainforest combines for 70% of the still intact rainforest of the earth.[280] The severity of the fate of the rainforest for the country and the world as a whole becomes apparent with these numbers. How important the rainforest for the overall climate record of Brazil is can be seen by the fact that Brazil ranks in the top group on the Climate Change Performance Index (CCPI) without taking land use change (rainforest destruction) into account,[281] but is ranking among the world's six biggest climate emitters by doing so.[282] In the last years saw the destruction of the rainforest first a decrease: between 2005 and 2007 a decrease from 18000 to 11000 sq km of annual destruction could be achieved, the average in the decade until 2008 lay at 16000 sq km. Nevertheless an increase had to be noted again in the year of 2008 (12500 sq km).[283] These numbers show that the decrease is unstable, especially as also for 2010 a new increase is projected. Further should be said that the amount of uprooting is in any case still huge, and most importantly should not a single hectare of Amazon be destroyed any more, as every such destroyed hectare worsens the problem of CC. A complete stop is needed and not a slight decrease.[284]

Now, the burning of the rainforest not only emits GHG's, but also significantly reduces the potential of binding CO^2 that is already floating in the atmosphere, thus worsening the problem of CC and further bringing the danger of decreasing precipitation and a following drying of the whole region.[285] Therefore the uprooting of the rainforest is added to Brazil's GHG emissions. Until now around 20% of the rainforest has been cut

[279]Fatheuer 2009 p.37;McCarthy 2009
[280]Simon 2008 p.1
[281]Rossow et al. 2010
[282]Greenpeace 2009 IV
[283]Mongabay 2008;Mongabay 2009 III
[284]Greenpeace 2009 IV
[285]Simon 2008 p.1,Revelli 2009

down, a further destruction of 20-50% is projected for the next 20 years.[286] It is estimated that the transformation of the rainforest into a savanna region cannot be prevented anymore if the destruction rate reaches 40%.[287] That the destruction of the rainforest is not stopped, although the devastating effects of this process are well known, is to be explained to a big part with economical interests of the major profiteers. The big producers of cattle and soy in the region are the most influential profiteers of the named destruction, but also land scalpers (called 'grileiros' in Brazil) qualify for that category.[288]

Cleared Rainforest

Agricultural production destroying rainforest and causing CC

The grileiros are acting with especially harsh means; often they are following new build roads or cut roads in the rainforest themselves (the total length of illegal roads in the Amazon rainforest amounts to 170.000 km), then burn the rainforest and fake deeds of ownership to declare themselves to the owners of the land. Due to the burning the farmers that were in possession of the burned land are often not able to recognize their land again. Although it is clear that Brazil simply is a too big country to control all areas sufficiently, it is to say that the police and the environment protection agency of Brazil, IBAMA, are not in possession of sufficient staff or equipment to gain control over only a bigger amount of such illegal methods, neither is the political leadership of the country

[286] Simon 2008 p.1;FAZ 2006
[287] FAZ 2006
[288] Wallace 2006 p.1;Evans 2009 p.3

putting sufficient focus on the issue.[289] Additionally was it discovered in the past that several dozen of IBAMA employees had been bribed and thus been cooperating with wood smugglers.[290]

The big agricultural producers are acting more discrete, but not with inferior destructiveness. Soy and meat are the most important agricultural export products of the country.[291] Brazil is since 2005 the biggest soy producer in the world, with a production of 20 million tons, which equals more than 5% of world production.[292] Brazil is further home to 200 million cattle and has become the world's leading exporter of beef and tanned leather. Brazilian beef exports have more than tripled in the last two decades; the value of Brazilian cattle trade in 2008 was almost 7 billion $.[293] On ground of its rapid spread the production of cattle and soy is evaluated as most important driver of deforestation. Both products are linked in their destruction of the rainforest: Soy producers replace cattle farms in the Cerrado areas, the cattle farmers then advance to hitherto untouched pieces of the rainforest.[294] Some 13 million hectares of former Amazon rainforest are now used to breed cattle. And around 80% of the mentioned growth of cattle breeding has taken place in Amazonia.[295] Currently is it estimated that cattle ranches account for 60-80% of rainforest destruction.[296]

Until 2006 when a moratorium on uprooting more rainforest for new soy plantations was introduced, soy was a major source for direct destruction of the rainforest as well (and not only indirectly as today). The vast expansion of soy led e.g. to the disappearance of the Atlantic rainforest in Southern Brazil.[297] And the loss of rainforest due to soy in the Amazon region was more than severe as well; soy production is here liable for several millions of hectares of rainforest destruction between 1990 and 2006.[298] After the moratorium was introduced the soy industry stopped its rapid expansion in the rainforest and instead started to buy up the land of the cattle breeders in the grassland, the latter hereby gained the financial resources to buy new rainforest areas for themselves and moved their cattle breeding to those areas. In effect have the cattle and the soy industry only changed roles after the introduction of the moratorium, the destruction of the rainforest continued. This process could only be stopped if also a moratorium regarding the felling of rainforest on ground of cattle breeding is

[289]Wallace 2006 p.1-3;FAZ 2006
[290]Wallace 2006 p.2;more on that in 4.2.4
[291]Dros 2004 p.9;Evans 2009 p. 3
[292]FAZ 2006
[293]Evans 2009 p.3-4; Greenpeace 2009 II p.3
[294]Lilley 2004;FAZ 2006;Dros 2004 p.28
[295]Evans 2009 p.3-4;McCarthy 2009 p.1
[296]Evans 2009 p.3;Greenpeace 2009 II p.3;Mongabay 2009 II p.1
[297]Dros 2004 p.1,23
[298]Bickel/Dros 2003 p.14-15;Dros 2004 p.26-28

introduced. That such a step is improbable will be explained in more detail in the next chapter, for now is it to say that even the extension of the moratorium on soy is always only short-term and further in doubt before every prolonging.[299] Further should it be noted that soy production is hard to monitor, therefore is it not sure if the moratorium has really stopped new rainforest destruction due to new soy cultivation.[300]

A special role among soy producers has Blairo Maggi, the world's biggest private producer of soy (with a production area of 400.000 hectare) has simultaneously been the governor of the Brazilian state of Mato Grosso, the Brazilian state with the biggest soy production until very recently (April 2010). The Maggi Group exported in 2004 around 2 million tons of soy to destinations in (mostly) Europe and Asia, destined for feeding livestock. Maggi who is also called 'rei de soja' (soy king), is furthermore allocating credits to around 900 smaller soy producers and subsequently buying and exporting their soy.[301] The double role of being the most important industrial and politician in the region of Mato Grosso provided Maggi, a decisive position in expanding agricultural production deeper into the rainforest. He was e.g. a decisive figure in the political struggle about opening up Amazonia for the construction of further streets (e.g. the BR-163 highway through the heart of Amazonia), ports and waterway expansions, in order to further spread large scale agricultural production.[302] Reports show that especially the construction of the almost 1,800 km long BR-163 allured ever more agricultural producers and grileiros, leading to a further destruction of the rainforest. After Maggi took office as governor in 2003 the deforestation rate doubled in his region. Maggi showed no concern for the development when he stated: "I don't feel the slightest guilt […]. We are talking about an area larger than Europe that has barely been touched."[303] Maggi further rejects accusations of conflict of interest, as according to him people knew his plans when they elected him.[304]

[299]Evans 2009 p.3;Mongabay 2009 II p.2
[300]Evans 2009 p.3
[301]Evans 2009 p.3;Wallace 2006 p.4;Lilley 2004;Dros 2004 p.22
[302]Lilley 2004
[303]Ibid.
[304]Bickel/Drus 2003 p.20;more on this issue in 4.2.3

The BR-163

The Brazilian corporations of JBS, Bertin and Marfrig are big players on the beef market and thus responsible for the production, procession and trade of a very big share of the meat and leather produced on former rainforest areas. Therefore are these companies key players in the destruction of the Amazon rainforest. These companies not only receive extensive loans from the Brazilian government, but also is the Brazilian state owning shares of these enterprises.[305] In example received these three companies loans amounting to 2.65 billion $ between 2007 and 2009 from the Brazilian government, in exchange secured the government shares of these companies. These three companies are the world's biggest leather traders and JBS is further the world's single biggest beef trader.[306]

But not only Brazilian producers profit from agricultural production that is directly or indirectly destroying the rainforest, also many foreign companies receive a big slice of the cake: e.g. have the US-corporations and soy traders ADM, Bunge and Cargill established dependencies in Brazil and make a good profit with this business.[307] Additionally is it reported of illegal soy transfer stations that Cargill maintains in the Amazon area, e.g. in the city of Santarem where the new soy terminal connects to the BR-163.[308] Also other international corporations are profiting from cattle breeding in Brazil; e.g. are the prominent foreign corporations of Nike, Reebok, Adidas, Timberland, BMW, Toyota, Honda, IKEA, Tesco, Kraft, Carrefour, Wal-Mart, Prada and Gucci profiting from the rainforest destructing and climate unfriendly cattle farming in Brazil due to their practice of buying (rather cheap) leather from unscrupulous cattle producers.[309]

[305]Sauven 2009;Greenpeace 2009 II p.2
[306]Greenpeace 2009 II p.3
[307]Dros 2004 p.8;Wallace 2006 p.5-6;Evans 2009 p.3
[308]Greenpeace 2006;FAZ 2006;Bickel/Dros 2003 p.17
[309]Sauven 2009;Greenpeace 2009 III p.1;Mongabay 2009 I p.1

These companies are thus spreading leather-products standing in close connection to rainforest destruction and CC all over the globe; as Greenpeace wrote in 2009: “all of us will have some byproduct of Amazon destruction in our homes somewhere.”[310]

Cargill’s soy terminal in Santarem

And also companies from other branches than agricultural production directly or indirectly earn money with the destruction of the rainforest, e.g. established the American farm machine producer John Deer a chain of dependencies in the uprooted areas of Brazil. Further examples are those companies that are directly selling timber (such as mahogany wood) of the rainforest to other countries, be it legal or illegal.[311] Another example of economic interests that works against CP is the plan of constructing several dams at the rivers of Xingu and Madeira, which shall supply aluminum smelters with energy but at the same time would set free a big amount of CH4 and other GHG’s (due to the necessary flooding of big forest areas).[312] A further example that stands in direct connection to the destruction caused by the Maggi Group, is the profit that European banks (e.g. Rabobank and Credit Suisse) made by lending bigger amounts of money (at least 250 million $) to Maggi. Even the IFC, a money lending institution operating in close cooperation with the World Bank, supplied the Maggi Group with

[310]Greenpeace 2009 III p.1
[311]Wallace 2006 p.1-3;Lilley 2004;Goodman/Finn 2007 p.5
[312]Wallace 2006 p.5

loans of around 30 million $.[313] Lilley argues that it has been this money supply from the World Bank that delivered Maggi the sufficient prestige to loan even more money from the mentioned international banks.[314]

The domestic agriculture corporations such as the Maggi Group and the dependencies of big foreign companies in Brazil take part in the mentioned fight among domestic groups for most political influence according to the mechanism explained in the liberalism-chapter (3.3). The reasons for the bigger influence of these organizations will be explained in more detail in 4.2.3.

[313] Bickel/Dros 2003 p.15,19;Lilley 2004
[314] Lilley 2004

4.2.2 The government's growth priority worsens Brazil's climate record and diminishes CP chances

Support for agricultural expansion from the government

Collecting the above given arguments it is to say that the deforestation of the rainforest and the worsening CO^2 record of Brazil is a product of profit focused business, but as will be seen in this part also a product of high hopes for a quick economic development.[315] It is apparent that the government is under considerable strain when it comes to the issue of the rainforest: on the one hand is the political leadership under pressure from ecological necessities and NGOs to preserve the rainforest,[316] on the other hand shall the speed of the economic development be maintained and here the expansion of the highly important agricultural industry is crucial.[317] Still many people are very poor in Brazil and the government has promised to bring a significant amount of these people out of poverty with the help of economic growth. Dros stated in 2004 that "state and regional development programs have discovered soy as interesting opportunity".[318] The same kind of hopes rests on the cattle breeding industry. Hope for quick development is unfortunately, often defeating environmental concerns; in economics and high politics.

That the latter claim is valid for Lula da Silva is becoming clear with the following arguments. The President articulated hopes that the share of Brazil in the global beef market will double until 2018, and is supporting the expansion of this agricultural industry by offering excessive loans (amounting to several billion $) to the cattle producers.[319] Another example for destructive politics in regard to the rainforest already during da Silva's first term in order to enable better development possibilities was the construction of the mentioned highway BR-163. This construction was part of a public-private arrangement between the government, the Maggi Group and foreign corporations that were interested in easier ways to produce and export soy, among them the previously mentioned American corporations of Cargill, Bunge and ADM.[320] Instead of supporting a more sustainable form of production, e.g. to see that land prices of rainforest areas increase in order to make a re-using of already deforested areas more profitable than further deforestation, the government supported the construction of the mentioned highway (that was as mentioned in the last chapter necessary to spread agricultural production even further) straight through Amazonia and thus clearly

[315]Giddens 2009 p.225
[316]Greenpeace 2010 I
[317]US State Department 2010
[318]Dros 2004 p.30
[319]Greenpeace 2009 III;McCarthy 2009;Mongabay 2009 I p.2;Sauven 2009
[320]Lilley 2004

chose unsustainable, profit seeking development over more sustainable measures. The mentioned project is part of the Avanca Brazil infrastructure program that was launched by the former government (but taken over by the actual one) to reduce transport time and costs for the soy, and to speed up the economical development of the region in general. The actual government not only took over the program of the old government, but established its own development program, the 'Program to Accelerate Growth' (PAC) to fulfill the same aims.[321] That the government supported the construction of the mentioned highway might be explained by the good relationship of Blairo Maggi and President da Silva. Maggi was one of the key lobbyists for the new highway, as he is through his soy company one of the biggest profiteers. Maggi himself delivered public support in the concerned region for the promise of the government to increase development, when he publicly promised in 2003 to triple the agricultural growth in Mato Grosso in ten years time.[322] This helped to hold the hopes for quick development and simultaneously the support for the government among the regional population up.[323]

Another important failure of the government, that illustrates that the rainforest issue is not enjoying priority on the political agenda, is to leave most felonies in connection with the deforestation of Amazonia without punishment. In example is almost nobody convicted for all the fire clearings, although 75% of these fire clearings are carried out illegally. Further was Cargill allowed to illegally construct its transport stations in the rainforest without punishment, although "its environmental impact assessment was faulty, massively criticized by social and environmental organizations."[324] Bickel/Dros explain the silent allowance to construct the terminal in Santarem that was given to Cargill with the fact that this terminal reduced the freight costs of soy from Mato Grosso to Rotterdam by 20% and the transport duration by three days.[325] Furthermore encourages the government the uprooting of the Cerrado areas, as the Brazilian Forest Code allows owners of Cerrado (which is the area that today finds most of new soy production) ground to uproot between 65 and 80% of the forest on the land;[326] this destructive law could have been changed by the government if the protection of the rainforest really had priority.

Additionally, on a different field of climate hostile activities the Brazilian government supports the highly GHG emitting domestic oil production. The state-owned oil giant Petrobras is the single biggest CO^2 emitter in Brazil, with 51 million tons of emitted CO^2

[321]Rodrigues/Soares 2009 p.2
[322]FAZ 2006;Bickel/Dros 2003 p.18
[323]More on the regional population in 4.2.3
[324]FAZ 2006;Bickel/Dros 2003 p.17
[325]Bickel/Drus 2003 p.16
[326]Dros 2004 p.26

in 2008. When in May 2009 new oil springs were discovered in front of the Brazilian coast, President da Silva commented enthusiastically: "This is the second independence of Brazil,"[327] a telling statement concerning the question whether CP or economic development enjoys priority among the administration.

On ground of the given arguments it becomes clear that the Brazilian government is prioritizing development and expansion of the agricultural industry over environment and rainforest protection and CP. In effect of this policy line almost 70.000 sq km of rainforest were destroyed alone on ground of soy production between 2003 (when President da Silva took office) and 2006.[328] Also in the second term of the actual administration the destruction, as mentioned earlier, continued; now rather due to cattle breeding in connection with the 'crowding-out effect' of soy production. The introduced moratorium is not sufficiently effective; the destruction of the rainforest is going on only under a new banner, this time cattle breeding. The development focused attitude of the government is therefore a key factor for the destruction of the rainforest and the worsening climate record of the country. Lula's claims that his administration would be at the forefront of fighting for CP, is therefore justifiably described as "widening chasm between rhetoric and reality" by John Sauven.[329]

In regard to the hopes for development and poverty reduction due to agricultural expansion it should be considered, that agricultural growth is not necessarily bringing poverty reduction; it is often rather big domestic or foreign corporations benefiting from this growth.[330] In example generates the large scale production of soy only one job per 200 hectares, whereas the former smallholder production created one job every 8 hectares, a growth of jobs (which is an effective way of fighting poverty) can thus not be expected.[331] Further are e.g. in regard to soy production in Brazil almost all soy traders besides Maggi foreign traders and thus do not pay taxes in Brazil,[332] and also many of the Brazilian corporations leave nothing undone to reduce their tax payments.[333] Therefore a distinctively higher tax income that could e.g. be spend for programs improving the living conditions of the poor is not generated as well. How poverty shall be reduced by allowing the corporations to export more goods and with that to increase benefits appears unclear. This supports the claim that the government is not following the course of agricultural expansion due to poverty reduction aims. It can thus be deducted that the reduction of poverty that was in fact detected in Brazil in recent years

[327]Rodrigues/Soares 2009 p.1
[328]FAZ 2006
[329]Sauven 2009
[330]Dros 2004 p.1
[331]Ibid. p.9-10
[332]Hunter 2008; Lawrence 2008 p.278
[333]Lawrence 2008 p.278; Greenpeace 2010 II; Hunter 2008

(a reduction of around 20 million people, 10% of the population)[334] was generated by other means; e.g. through the distribution of low-interest credits or food aid programs, financed by e.g. Brazil's dynamic consumer market.[335] However, should it be noted that the country is still only placed on rank 70 in the HDI.[336]

The failure of CP measures and the reason for the same

Nevertheless should it be mentioned that efforts to strengthen environmental and sustainable policies, and with that to protect the rainforest and the climate were without doubt visible in the past. The former Brazilian minister for environment Marina Silva stated in 2006 that Brazil must not waste its long term resources (the rainforest) for short term profits. Silva was one of the few advocates of rainforest protection and CP in the Brazilian administration and was also evaluated as a 'bulwark against deforestation' by the international environmental community.[337] Corresponding to these statements were the efforts of the environment ministry in these years: Marina Silva carried out deforestation control initiatives, almost 20 million hectare of Amazon land were designated for environmental protection between 2003 and 2008, and the introduction moratorium on soybean planting in the Amazon region, which was renewed both in 2008 and 2009,[338] had at least a signaling effect.[339] Together, the described measures showed effect after reasonable time: the deforestation of the rainforest was still taking place but with decreased speed for the years between 2005 and 2007.[340] This shows that it is possible to successfully fight rainforest destruction and with that CC in Brazil, if one approaches the problem with the right political strategies, despite the enormous size of the country and the fact that illegal uprooting will never be prevented totally. The example of Marina Silva shows that there are and were actors in Brazilian politics that act in favor of CP; however were these actors not able to enforce priority for CP on the domestic political agenda. The latter also due to disagreement over CP inside of the administration.

[334]Forero 2010 p.1
[335]Forero 2010 p.1
[336]UNDP 2008
[337]Barrionuevo 2008
[338]Barrionuevo 2008;Wallace 2006 p. 2,Greenpeace 2009 IV
[339]Barrionuevo 2008;Mongabay 2009 I p.2
[340]Mongabay 2008

That such efforts are thus not the dominant policy line among the government and the whole political class of Brazil has a reason: the pressure for economic and business development that comes from domestic but also foreign (the foreign corporations) political actors. One of the biggest promises of the actual administration to its population has always been the reduction of poverty; therefore the government is seeking to keep this promise.[341] The aim to bring some of the many poor people in Brazil out of poverty is per se a very honorable aim, but as mentioned is the connection between agricultural growth and an improvement of living conditions everything else than an automatic one and further is the government of da Silva willing to sacrifice the environment for development. As will be seen in the next chapter is the majority of citizens against development on the expense of the rainforest. The mentioned sacrifice is therefore not made on ground of philanthropic motivations for poverty reduction but shaped by the influence of the strongest interest groups, namely the agricultural corporations and other economic or political profiteers of this destruction (the latter e.g. refers to Maggi and his successor Silval Barbosa). This influence is e.g. executed through the FIESP, the most powerful business association in Brazil, representing 132 industry associations. The officials of this business association "routinely advise the Brazilian government on a wide range of business matters."[342] Many trade associations that represent the agricultural industry further support the governors (20 out of 27) and many congressman (around 30%) with donations for election campaigns.[343] Among the companies that donated the most money were also the mentioned Marfrig and Bunge.[344] The fate of the former minister for environment is a good example for this decisive influence of the corporations and their supporters in politics: After Marina Silva had criticized the biofuel enthusiasm of the President, she found herself being at odds with Lula da Silva even more, when IBAMA (led by Marina Silva) refused to endow certain economically motivated development projects (e.g. the mentioned dams at the Madeira river) with environmental licenses.[345] These incidents isolated her in the government and she in consequence resigned in 2008.[346] Marina Silva stated afterwards that she had gained the conclusion that against the extensive lobbying of profit orientated corporations her ministry was rather powerless and that she had to take the consequence of this state of affairs.[347] On the day of her resignation Silva additionally "acknowledged that governors in frontline Amazon states were pressing the president to rescind measures intended to check deforestation", and that the governors of Mato

[341]Forero 2010 p.2
[342]Rodrigues/Soares 2009 p 4
[343]Ibid.
[344]Ibid.
[345]Barrionuevo 2008;Schenk 2009;Revelli 2009
[346]Rodrigues/Soares 2009 p.3
[347]Barrionuevo 2008;FAZ 2006

Grosso (Maggi) and Rondonia had resisted the directions of her ministry.[348] Also Marina Silva's successor Carlos Minc is already faced with pressure (and public insults) from the governors.[349] The resignation of Marina Silva thus underscores "the tension between environmental concerns and the powerful agribusiness sector that has been a primary engine of growth."[350]

In effect it has to be concluded that the agriculture industry executes an influence on the government, which leads the latter to increase the possibilities for an ever bigger production. The government in effect sacrifices a sufficient CP. The mentioned large companies and individual influential politicians, both motivated by self-interest, use the demand for poverty reduction and the government's promise to deliver the same to pressure the government to allow also 'dirty' measures of development, namely rainforest destroying industrialized production. A certain amount of the people in the regions with extreme agricultural growth (e.g. Mato Grosso) might then be pocketed by these corporations, and might also start to pressure for bigger agricultural production at the expenses of the rainforest and the climate, in ignorance of the given arguments on employment possibilities and tax generation of industrialized agricultural production. That the government allows the mentioned destruction is however not only a consequence of blunt pressurizing that the government would be helplessly confronted with (especially as the President is in his second term and cannot be reelected), but also a consequence of the fact that the government has made the expansion-aims of the agribusiness corporations to the own aims.[351] Forero shares this interpretation when he writes that Lula is "a market-friendly steward of the economy" and that Lula would be very "popular today among Brazil's business community."[352] The government has in the words of Putnam 'constructed a coalition' between the corporations, the governors and itself. The policy line of the Brazilian government is in other words shaped to the biggest part according to the mechanism of domestic politics described by liberalism. The role of the population will be put in focus in the next chapter.

[348]Barrionuevo 2008
[349]Rodrigues/Soares 2009 p.6
[350]Barrionuevo 2008
[351]Rodrigues/Soares 2009 p.2
[352]Forero 2010 p.2

4.2.3 The willing but unsuccessful role of the population regarding CP

Brazilian population is aware of CC problem and has good basic conditions regarding public protest

As seen in 4.1.2 was the uninformed and irresolute attitude of the Chinese population a major reason for the not delivered pressure on the government concerning CP, and with that also a factor blocking CP in the country. As seen is in Brazil the uprooting of the rainforest and with that a bigger cause of CC running on; a population that successfully forced its government to stop rainforest destruction is therefore in any case not to be found in Brazil. The question that shall be answered in this chapter is then if the public was not willing to press for CP or just not successful with the same, and what the reasons for this were.

The attitude and role of the Brazilian population concerning CC is different than in China. There are good arguments to believe that the pressure of the Brazilian population on its government to carry out CP measures is profoundly higher than in China. Most Brazilians (79%) were aware of the CC problem according to a 2009 Gallup poll. The same poll revealed that further a big share of the population was convinced of the seriousness of the CC issue, 76% perceived CC as a serious personal threat.[353] According to a BBC poll was the share of the urban population (which has a grave impact in Brazil as it accounts for 84% of the population) holding such a view with 86% even higher.[354] A big majority of Brazilians is additionally convinced that CC is a phenomenon that is caused by human activity, 80% expressed such a view.[355]

The share of people content with the government's (and the business leader's) measures to tackle CC is with only 43% rather low according to a Reuters poll (57% not content).[356] A Gallup poll asked more specified about the satisfaction with the government's efforts to reduce CO^2 emissions; also here discontent with the government became apparent as only 30% stated that the government did enough in regard to CO^2 reduction.[357] The Brazilian population is further not putting too much weight on the question who should move first, the developed or the developing countries, as 55% stated in a 2010 Gallup poll that both categories of countries should move at the same time, only 22% expressed the opinion that the already developed

[353]Gallup 2009a
[354]BBC 2010 p.6
[355]Gallup 2009b
[356]Reuters 2010
[357]Gallup 2010

nations (e.g. US, Japan, Germany) should move first.[358] A majority of the urban population (53%) further stated that they wished for a leadership role of their administration in the COP15.[359] That the Brazilian population would not be pressing for CP due to feelings of injustice concerning the global CC politics can with these latter numbers be eliminated as possible explanation for the ongoing rainforest destruction as well. Additionally can it be foreclosed that a majority of Brazilians is prioritizing economic growth of the country over CP measures, 62% of the urban population would support CP even if that hurt economic growth according to the mentioned BBC poll.[360]

As Brazil can be evaluated as stable democracy (according to freedomhouse Brazil is doing very well regarding civil liberties and political rights)[361] which leaves space for a broad landscape of organizations and associations that could press for CP, the political system is to be eliminated as a possible explanation for a not delivered CP pressurizing as well. Unlike to the explained situation in China, people in Brazil do not have to be afraid of openly opposing the government. Possible CP campaigning is thus not blocked by fear, as this is the case for a hypothetical CP movement in China. An example for this is a demonstration of more than 1000 people against the expansion of soy plantations and the connected rainforest destruction in the city of Santarem in 2006.[362] This interpretation of higher possibilities for free action of interest and protest groups in more democratic systems is shared by Putnam, as seen in 3.4.

The mentioned protests in the city of Santarem

[358]Gallup 2010
[359]BBC 2010 p.7
[360]BBC 2010 p.6
[361]Freedomhouse 2010b
[362]Greenpeace 2006

The reasons for the unsuccessful role of the population in regard to CP

On ground of the above-mentioned arguments one can foreclose a non-willingness of Brazilians as reason for why CP is not provided sufficiently in Brazil. According to the presented numbers it is rather to say that Brazilians are willing to contribute to CP, but that the big share of the population that supports CP was not successful with converting the majority's attitude into national politics. Instead supports the government (as seen) rainforest destroying investments and businesses, and the country is still among the top group of GHG emitters. The reasons for the fact that the attitude of the majority of the population was not able to influence government politics decisively shall be explained in the following.

First might the CP supporting attitude of the national majority have been blocked with the help of a regional attitude. There are serious indications for the claim that the majority of the people in those states where the deforestation takes place carry a different attitude concerning CP, e.g. the mentioned state of Mato Grosso. Despite his disastrous image as rainforest destroyer (he even received the golden chainsaw from Greenpeace) Maggi was reelected as governor with a big majority (65.4%) by his constituency.[363] Maggi gained an image as man of action who could bring jobs and economic development. He was so popular that he even considered to run for the Presidency in 2006 and is now running for a seat in the national senate.[364] The people living in the states with the enormous destruction are obviously those that experience this destruction the best, still Maggi was reelected. That makes clear that among the population in Mato Grosso Maggi's success as entrepreneur made up for many environmental sins. States in Brazil have due to the high degree of federalism a rather large wiggle room for autonomous policies, state interests therefore often "prevail over national concerns".[365] Attitudes that clearly favor economic development over CP in an important region (as it is apparently the case in Mato Grosso) can therefore have a significant impact on the national result concerning CP even if the attitude of the majority of the national population is of a different nature.

The second detected factor that provides for the low CP pressure, is the fact that the middle class in Brazil is still rather small, which can be seen in the fact that Brazil still rates outstandingly high on the Gini index (with 0.55 Brazil has one of the world's 10 highest income inequalities).[366] To explain this claim it shall first with Friedman be noted that "green movements [as e.g. a CP movement] historically [...] started as grassroots

[363]Fleischer 2006 p.8
[364]Wallace 2006 p.4;Mongabay 2010 I p.3
[365]Cheibub et al. 2002 p.4
[366]UNDP 2009

movements in democratic societies."[367] This is possibly the case as "the best enforcers are engaged citizens", who really care about an issue.[368] Most of the mentioned environmental grass root movements (e.g. the movement against nuclear power in Germany) were started by people from a large and secure middle class, who did not have to bother with phenomena such as extreme poverty.[369] As this class of people is neither in the majority in Brazil yet, nor providing for a bigger share of the population, it has to be concluded that the chances for a citizen-lead (grass-root) CP movement to evolve in Brazil, are not particularly good.

Further is it to conclude that the lobby of the corporations and politicians that profit from deforestation is obviously more powerful than the attitudes of the majority, or the campaigning of engaged citizens. This claim is e.g. supported by the statements given by Marina Silva after her resignation that were delivered in the previous chapter. The big impact the lobbying of the big corporations has can be explained due to the fact that the (at most) campaign willing class, the middle class, is still rather small in Brazil and that the corporations have the bigger amount of resources (money, political connection, see chapter 3.3). That the lobbying of the agricultural industry is supported by a big amount of money can be deducted from having a glance at the business volume of this industry; e.g. accounted alone the cattle trading companies for a business volume of 7 billion $,[370] and by having a look at the high amount of financial support for election campaigns coming from the corporations.[371] In terms of decisive political and economic connections Maggi is an indicative example: He is not only a political ally of Lula da Silva - what parallels a high level of organization and information – but also combined the position of the country's biggest soy trader and the most influential politician in the most important state for agricultural production in his own person, and further influenced around 900 companies by loaning money to them and additionally held excellent contacts to the national government.[372] A further characteristic example for the mutual exercise of influence between big corporations and the state organs is the fact that (as mentioned) the state holds shares of the country's biggest beef and leather traders.[373] Therefore will the corporations succeed in coming through with climate unfriendly and rainforest destroying, large scale, unsustainable, agricultural production methods and will be able to construct a political framework that is well-disposed concerning their economic aims. That also international dependencies provide for the unpromising chances of domestic environmentalists in Brazil should be mentioned as well. These CP blocking dependencies will be explained in the next section.

[367]Friedman 2009 p.412
[368]Ibid. p.414
[369]Friedman 2009 p.412;Hasenöhrl 2003 p.10
[370]Greenpeace 2009 II p.3
[371]Rodrigues/Soares 2009 p.4
[372]Wallace 2006 p.4
[373]Sauven 2009

4.2.4 International demand and neorealistic politics blocking climate protection in Brazil

Demand for Brazilian agricultural goods (and wood) from other countries blocking CP in Brazil

The first major international issue that blocks CP in Brazil is the demand for the rainforest destroying goods of soy, beef, leather and wood from many developed and developing countries in the world. A higher foreign demand for these products increases the incentives for big corporations and small producers to ever expand production, for this expansion ever more rainforest will be uprooted. The government will allow such expansion as explained in the last chapter. With that the international demand is responsible for the exertion of influence by the big corporations in Brazil as well; this claim is following the mechanism explained in chapter 3.3. On ground of that Wallace analyzes that "the dynamic of globalization has reached the Amazon."[374] Stephanie Brault argues in the same direction when writing: "the Amazon is increasingly linked to globalized markets, which have an insatiable appetite for timber, beef, soybeans [...]".[375] The higher demand for the mentioned Brazilian products on the world market provides ever more incentive for agribusiness expansion in Brazil.[376] This connection can be illustrated by the fact that the uprooting of rainforest in Brazil increased again in 2008 after an increase of the world market price for soy.[377] And also Dros stated already in 2004 that the hopes on soy had been fuelled by the high prices for soy on the world market that were to be found for the biggest part of the decade until 2004.[378]

A first example for international demand fuelling rainforest destruction is the demand for Brazilian timber and soy in China. China's demand for timber has largely increased due to its rapid growth in the last decades. This demand is further fueled by the mentioned international wood-processing industry that has moved to China (e.g. IKEA and Home Depot).[379] As at the same time the Chinese administration has imposed a ban on big scale wood-logging in China itself (due to floods and desertification), China is importing wood from all over the world, including Brazil. In fact is China the world's largest importer of tropical logs.[380] The Chinese purchase of big amounts of Brazilian wood is especially destructive, as the wood is mostly only accessed due to bribery of the

[374]Wallace 2006 p.1
[375]Brault 2009 p.5
[376]Mongabay 2010 II
[377]Barrionuevo 2008 p.2
[378]Dros 2004 p.12
[379]Goodman/Finn 2007 p.1-2
[380]Ibid p.1,3

controlling officials (e.g. IBAMA) and as this logging is therefore illegal and so completely out of control of the Brazilian institutions.[381] As explained in 4.1.2 is the demand for meat and dairy products increasing rapidly in China, as much more people can afford these products now. This demand is so big that it must be satisfied by importing those products and goods that are essential for the domestic production of meat and dairy products, as e.g. soy which is used as animal feed.[382] A major source for soy and meat is Brazil, e.g. exported Brazil in 2008 37.4 million tons of soy to China, an increase of 21% to 2007.[383] In the future China could further become a significant consumer of Brazilian produced oil from the newly explored springs.[384] All these Chinese demands boost direct and indirect rainforest uprooting in Brazil.

Also producers and consumers in developed countries, e.g. in Europe, demand the mentioned Brazilian goods and thus profit from the cheap but rainforest destroying agricultural production. A big share of the beef, pork and dairy products that are eaten in European households are produced with the help of Brazilian soy after animal meal was banned on ground of mad cow disease in the 1990s.[385] Without Brazilian soy this meat would either be much more expensive in the EU or would be sold with less profit, as up to 50% of Brazil's soy is used for feeding livestock in Europe.[386] Further is Brazil also exporting large amounts of meat to Europe; the country already in 2001 delivered 74% of Europe's imports of processed meat. In effect was it analyzed that the growth in Brazil's cattle industry is since 2003 largely export driven.[387] That many global corporations use leather produced in the Amazon rainforest in their products and that European consumers end up buying these rainforest destroying products was mentioned earlier. It is projected that the demand for soy, leather and beef will further increase in the future (the demand for soy is e.g. reported to increase by 60% until 2020, calculated from a 2004 level)[388], as demand for cheap produced meat is growing as well. Due to the globalized chain of products and trade flows consumers can not really track the origin of the products: mostly only the last location of production is named on a product, e.g. in case of furniture produced in China with illegally logged Brazilian wood, companies put the sticker 'Made in the US' on if the last step of production was carried out in the US.[389] Therefore consumers often even unwillingly contribute with their demands and buys to the destruction of the rainforest and an

[381] Ibid p.1-2,5
[382] Evans 2009 p.2-5;Forero 2010 p.2
[383] Brault 2009 p.2;Mitchell 2010 p.1
[384] Rodrigues/Soares 2009 p.1
[385] Dros 2004 p.8;Mitchell 2010 p.1;Wallace 2006 p.6;Greenpeace 2006
[386] Evans 2009 p.3; FAZ 2006
[387] Brault 2009 p.2
[388] Dros 2004 p. 1,8; McCarthy 2009 p.1-2
[389] Goodman/Finn 2007 p.7

increased CC problem.[390] It can be argued that European (and American and Chinese) consumers act as free-riders as well, as they are not contributing to the establishment of the common good of CP (e.g. by buying more expensive but sustainable products), but instead buy products of GHG emitters; although many consumers are as explained not aware of this problem.

Government reacting on influence of strongest domestic lobby groups in international negotiations

In 4.2.2 it has been shown that the government is strongly supporting the aim of the agricultural industry in Brazil to expand the business. The state holds as mentioned shares of some of the biggest Brazilian companies in the agribusiness and further supported many of these companies with extensive loans. President da Silva further repeatedly expressed his very positive attitude towards this business and came forward with plans to extensively increase the agricultural production of the country (see 4.2.2). A sharp agreement on rainforest protection and emission reduction would logically diminish the chances of agricultural expansion in the described style in Brazil. It is therefore to assume that the defection of the Brazilian government on an international agreement concerning emissions reduction as member of the BASIC alliance at COP15 (as explained in 4.1.3) was determined by this domestic politics. The government prioritized the interests of the big corporations, in Putnam's words took the government a clear 'decision' which interests to 'appease'.[391] The consequence was that Brazil, due to the interests of the agricultural industry, played the role of a 'free-rider' on the international level (chapter 3.2) when it came to emission reduction aims. President da Silva was according to Putnam's categories of motivations of state leaders in negotiations clearly motivated according to category one: he tried to improve his domestic standing by delivering those results that were wished by the most influential interest group that supports him (the agricultural lobby), and thus was able to increase his 'political resources'.

According to Putnam's theory of a two level game this assumption is justified, as according to this theory political leaders try to satisfy the priorities of the strongest domestic influence groups (in the issue of CP/rainforest protection in Brazil as seen the agribusiness) in the international negotiations (see 3.4). As the government tried to uphold the chances for agricultural development, an agreement diminishing this expansion lay with Putnam's words outside of the (very small) Brazilian 'win-set'; the Brazilian administration therefore executed a 'voluntary defection' at COP15. The

[390]Mitchell 2010 p 2
[391]Putnam 1988 p.446

government could do so as costs of defection for the strongest domestic interest group were as mentioned not existent, if such an agreement had been signed the costs for the corporations would on the contrary have been very high. The mentioned lobby groups did however not have to press on the government to prevent such a CP agreement, as the government anyway had taken over their interests. Rodrigues/Soares quote a former Brazilian government advisor, who stated that "you won't see Brazilian industries doing the same [lobbying] because they don't need to. Everything is in their favor in Brazil."[392] It can thus be concluded that the strong influence of the big agricultural companies in Brazil (may they be foreign or domestic companies) on the government is bringing the Brazilian leadership in a position at international negotiations that makes agreements concerning emission reduction almost impossible and that therefore prevents CP. In the case of Brazil Barnett was therefore right with his claim that the positions of countries towards climate regimes are "the product of a two-level-game", as well.[393]

Government combining clientele politics with neorealistic political course

Besides the two already delivered arguments it can be claimed that neorealistic international politics are another reason for the not delivered CP in case of Brazil. One can argue that the Brazilian administration is trying to improve the position of Brazil in the international hierarchy with its defection on an international emissions reduction agreement and its support of the domestic agribusiness expansion. This neorealistic politics can due to overlapping aims be combined with the safeguarding of the corporation's interests that were described before. The agricultural expansion will increase the amount of exports and thus will place Brazil "on a playing-field with other major world exporters".[394] A growth of the national economy as a whole, which is connected with growth of the agricultural sector, would furthermore increase the power capabilities of the country. CP which would endanger economic growth would thus diminish Brazil's power capabilities and relative gains in relation to other countries; a risk of falling back in relation to other developing countries in the world might therefore be connected with CP. Brault shares this view that Brazil is also pursuing a neorealistic political course as she states that for the Brazilian government "the economic benefits of becoming a global leader outweigh concerns for environmental preservation."[395] The role of Brazil as free-rider on the issue of CP is also a logical consequence of Brazil's neorealistic power and status ambitions.

[392]Rodrigues/Soares 2009 p.2
[393]Barnett 2007 p.1367
[394]Brault 2009 p.4
[395]Ibid.

The defection of the country in regard to possible own GHG reduction aims at COP15 and the decision to join the BASIC alliance fit to such a presumed neorealistic course. An agreement at COP15 would have diminished the Brazilian chances for relative gain. It was therefore rational to sustain the role of a 'free-rider', and to hope that the non-excludable good of CP (chapter 3.2) would be provided by other nations. Following this logic one could additionally argue that the membership in BASIC delivered an opportunity to ally with at least one significantly stronger nation (China), and with that to show the world and other nations in the region Brazil's new importance for big world powers; this interpretation fits to Brazil's status as 'emerging regional leader' and it was therefore claimed by Rodrigues/Soares that in Brazil "environmental matters get subordinated to other matters of regional interest."[396] This opinion is e.g. shared by Jean-Christophe Hoste.[397] It can thus be concluded that Lula da Silva was also motivated in the COP15 negotiation by another category than personal advantages, namely the interests of the country.

It further fits to this interpretation that Brazil at COP15 disagreed with China on the question if the developed countries should write concrete numbers in the agreement: as Lynas reports, spoke the Brazilian delegate in the negotiations in favor of such concrete numbers for the developed nations.[398] As shown was it most rational for China to press against such concrete numbers (chapter 4.1.3). For Brazil it was instead most rational to speak in favor of such a deliverance of concrete aims by the developed nations. This can be explained with the increased chances for relative gains if numerous developed countries had to carry out GHG reduction measures whereas Brazil would be allowed to continue with its current course. That Brazil could sustain such a course is a consequence of the fact that Brazil would not come as much under pressure as China to come forward with own concrete numbers in a few years time, in case of the adoption of an agreement. The reason for this is that China is the biggest emitter worldwide hereby binding a lot of attention, whereas Brazil only ranks on position six and this only if one includes the rainforest destruction in the statistics, what is still often overseen.[399] Further is Brazil more successful in generating an image which pretends that the country is an active player in the fight against CC; this can be seen in a newly signed initiative from France and Germany to financially support the Amazon fund,[400] while at the same time the government-sponsored uprooting continues. The government e.g. further published plans for a reduction of illegal uprooting and GHG emissions (a reduction of 36% until 2020) that look very ambitious at first glance, but that operate with statistical tricks: e.g. applying the promised reduction of uprooting on a timeframe when the

[396]Rodrigues/Soares 2009 p.1,3
[397]Hoste 2010 p.7
[398]Lynas 2009 p.2
[399]Pittock 2009 p.289;Greenpeace 2009 IV
[400]Müller-Kraenner 2010 p.4

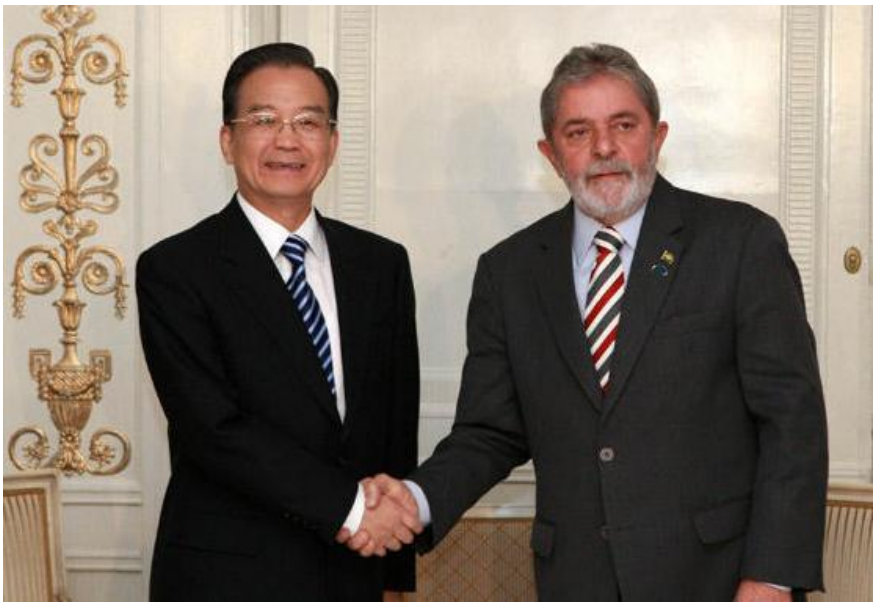
destruction rate was significantly higher than average.[401] The aims regarding GHG emission reduction are completely unrealistic if one bears the planned expansion of the agricultural production in mind,[402] and additionally did the government not want to deliver on these promises at COP15. Not for nothing spoke Sauven of a "widening chasm between rhetoric and reality".[403] The Brazilian government was by that able to portray itself as a key climate protector among the nations of the world, and thus was able to repel all criticism on its further agricultural policy.[404] One could also count the earlier mentioned soy moratorium in effect to these 'image tricks'.

Just as in the case of China can also the blocking of CP by the Brazilian government seem as a paradox; the costs of the consequences of CC outweigh also in case of Brazil the costs for mitigation of CC. In case of Brazil is this 'paradox' to be explained with the following: As the country and its leadership have a green image and as the country is member of the block of developing countries and among them not the biggest polluter, all other key actors will be faced with higher pressure to come forward with CP action than Brazil; in other words: everybody else will have to move before it is Brazil's turn. The Brazilian leadership knows this and plays according to this fact the role of a classic free-rider. Altogether is it most rational for Brazil not to move in the CP issue: If the other players decide to do something against CC then Brazil will have enormous relative gains, and if they decide not to do so, Brazil has not lost anything.

It was still rational for Brazil to join the BASIC group for the mentioned reason of signalizing the own importance and due to another reason: Brazil's ambition for a permanent seat in the UN Security Council.[405] This ambition made it even more rational for Brazil to join the BASIC coalition around China, as China is due to its status as actual permanent member of the Security Council one of the few most influential countries in the UN bodies. This is a classic political trade-off, as defined by Putnam: The issue of CC is used as a 'bargaining chip' in international negotiations.[406] It can therefore be said that the CC issue is part of the 'state strategy' to achieve the 'state preference' of a permanent seat in the Security Council (see chapter 3.3). The alliance of Brazil with China due to neorealistic reasons further tears the image of President Lula as a fighter for international justice in the fight against CC apart. President da Silva e.g. stated in his assessment of COP15 that the already industrialized nations would bear a historical responsibility and that action must be delivered from these nations first,[407] a statement

[401]Fatheuer 2009 p. 37-38;McCarthy 2009;Rodrigues/Soares 2009 p.2
[402]Rodrigues/Soares 2009 p. 2
[403]Sauven 2009
[404]Fatheuer 2009 p.38
[405]Rodrigues/Soares 2009 p.3
[406]Ibid.
[407]Hoste 2010 p.5

that is similar to earlier comments.[408] However, as the EU and the US were both willing to deliver concrete reduction numbers at COP15 (as explained in 4.1.3) one cannot argue that the developed countries did not try to act according to their responsibility. This was left out by President da Silva in his statement after the conference. Would Lula really have been concerned about the justice issue then he should have been enraged over the negotiation line of China, which in effect prevented the intention of the developed countries to come forward with concrete numbers first, this being exactly what would be the most wished outcome when being concerned about the justice of CP. But as said was the possibility of public critic on China traded away for the membership in a signaling coalition and improved prospects for a permanent seat in the Security Council.



[408]Rodrigues/Soares 2009 p.1

5 Conclusion

This thesis tried to detect the underlying reasons for the fact that CP is not carried out in China and Brazil. Causes for this blockade of CP were found with the help of a theoretical framework both on the domestic and the international level. For the case of China the detected reason on the domestic level is a clear prioritization of development over CP by the government, caused by the craving for development of the population; this population is not pressing for CP and prioritizing development as well. On the international level the first reason for the non-deliverance of CP is an extensive emission outsourcing towards China, steered by Western corporations, but supported by the Chinese leadership due to hopes for a quicker development. The second reason is a non-cooperative, free-rider course of the government in regard to possible climate agreements, fueled by the pressure to deliver development. Another reason for the non-cooperative nature of China concerning climate agreements is most probably the fear of the leadership to lose a part of its national sovereignty and to come under higher internal and external pressure on other political and societal fields as well, if an international compromise on CP and a connected monitoring of its execution would be concluded. Concerns about the international justice of the CC issue could thus be eliminated as possible explanation, just like the argument that the hesitant role of the EU or US would cause a CP blockade in China.

In case of Brazil the domestic reasons for the CP blockade were first of all the large scale rainforest destroying activities of the big agricultural industry. The government and regional politicians support these activities as they are closely related to some of these companies (due to e.g. shareholding or the financing of election campaigns), and as they are hoping for a boost of the economic development of the country. The majority of the population is disapproving of such a prioritizing of development but is not strong and effective enough in the domestic struggle about the adjustment of national politics to prevent such a stance of the government, this providing another reason for the non-existence of a sufficient CP. International demands for Brazilian commodities further increase the incentives for an ever expanding rainforest destroying agricultural production in Brazil, and provides the corporations additionally with bigger financial and argumentative means to influence the government's policy. The Brazilian government has taken a very destructive stance in international negotiations concerning CP due to the influence of the agricultural corporations. Another motivation for its CP blocking course in the international arena is thus its aim of improving the status and influence of the country in the region and the world. The issue of international justice is similar to the case of China not a real trigger for the non-deliverance of CP, but is only used to deflect pressure on the developed countries.

It is to conclude that the main trigger that prevents for effective CP is in both analyzed countries the aim of economic development. In China mainly caused by the pressure from the population and in Brazil mainly caused by the strong influence of the agricultural corporations on the political decision makers. The governments of both countries are then combining these influences from the domestic level with the aim of improving the status of the own country in the international hierarchy, and so pursue a neorealistic course on the international level. That development aims could be identified as main trigger in both very different countries illustrates the importance of these aims in regard to the overall research question; the same is valid for the neorealistic course of both countries on the international level. And further are strong indications in regard to the question what the main triggers for a not-delivered CP in other big developing countries might be delivered. This interpretation is in line with the description of the used most-dissimilar-systems design (chapter 2.1).

Concerning the prospects for an improved CP in the future, several options exist. A first chance would be to stop the trend of ever growing demand for goods from unsustainable production in the Amazon or the energy intensive, outsourced and export orientated factories in China. This chance lies at the side of environmental NGOs such as Greenpeace and the consumers in Europe and elsewhere. If the former would raise more awareness in regard to the consumption of the mentioned unsustainable and CC triggering products, a bigger part of the Western consumers might go for sustainably produced goods instead. In a globalized world global interdependencies are generated; therefore could the boycott of goods from such climate aggressive productions have an effect on corporations and governments: If the agricultural sector in Brazil and the industrial sector in China would come in danger on ground of a boycott of European and American consumers, the governments would be forced to change their politics on the CP issue, the pressure generated from the consumers would then with a high probability be bigger than the one by the responsible corporations as the economic development of the countries as a whole would be at play. This interpretation is in line with the domestic political mechanisms explained by liberalism. An example which shows that highlighting destructive origins of products can have an effect is the moratorium on further expansion into the rainforest due to soy production: this was introduced after Greenpeace and other NGOs made this issue known to a wider public and thus generated a wave of bad press for companies such as the soy trading Cargill, or McDonalds which was placed further down on the supply chain. Brazilian soy was soon 'not fashionable' any more, and producers feared for their market share.[409] Although this moratorium has as explained not been effective was the Brazilian government only forced to deliver the same due to international pressure.

[409]McCarthy 2009 p.2;FAZ 2006 p.3

In relation to the problem of outsourcing it should further be noted that the Kyoto Protocol allocates emissions to those countries where they are produced, not where they are consumed.[410] This shows that Kyoto is somewhat 'outdated' and would need a revision concerning this critical issue in order to end the debate about who is responsible for the increase of emissions in China. A revision of this issue towards a higher responsibility of the profiting corporations would increase the chances for a new binding international agreement.

It is a stunning fact that majorities in both analyzed countries do not care about the question who should move first, but prefer a solution where all countries move together. This shows that the populations are already ahead of their governments, the citizens are in contrast to their political leaders not paralyzed by neorealist calculations. A move to a more democratic system in China would higher the chances for a new CP agreement as well, as the majority of the population would in fact be eager to not only create a compromise on CC with other key nations that would lead to an active Chinese role in the fight against CC, but would also be willing to support CP in other, even poorer, nations. Until now this attitude of the majority of the population is without influence, as the authoritarian government is able to determine the national course on CC itself (although as explained this course of the government is a consequence of the government's fear of repercussions from the population if development would be slowed by CP). If the population would change its attitude in regard to international CP

[410]Clark 2009 p.1-2

cooperation if it would become aware of the fact that CP might slow development is not to project. But also in Brazil more 'real' democracy in regard to CP would be helpful; as the fact that the clear majority of the population is wishing for a leadership role of its country in the international CP cooperation and is further willing to deliver concessions to stop CC, (including a possible slower growth) is not reflected in the national policy line concerning the rainforest and CC. That the type of government (e.g. if the decision of carrying out CP measures is shaped by democratic procedures) could make a difference disproves Waltz' claim that such attributes of states do not play any role when foreign policy of states is determined.

And lastly, as a certain degree of warming has already become inevitable, measures of adaption have to be carried out with an increased speed and effectivity. Adaption refers to 'adjusting' current societies and nature to global warming and by this reducing the damages of the same (e.g. with investing in coastal defense or water management, or the change of human behavior such as food choices).[411] Adaption measures make sense when considering that the „options for successful adaptation diminish and the associated costs increase with increasing CC.“[412] A duality of mitigation and adaption strategies appears logic and necessary in face of the complexity and uncertainty that surrounds the CC process.[413] Therefore investments have to be made in both strategies.

[411]IPCC 2007 II p.19
[412]Ibid.
[413]Plöger 2007 p.5-6