

# The influence of uncertainty on the framing of REDD in Norway, Germany and Canada

Inken Reimer\*

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1 Abstract.....	2
2 Introduction.....	2
3 Constructing Knowledge on REDD.....	4
3.1 Decision-making on REDD under uncertainty.....	5
3.1.1 International agenda-setting of REDD.....	5
3.1.2 Framing REDD.....	8
4 Factors for Utilizing Uncertainty.....	9
4.1 Actor-constellation.....	9
4.2 Agenda-setting.....	10
4.3 Economic capacity.....	11
5 Utilizing Uncertainty: The case of Norway.....	11
5.1 Actor-constellation on REDD in Norway.....	11
5.2 Agenda-setting on REDD in Norway.....	13
5.3 Economic capacity for REDD in Norway.....	14
6 Discussion.....	16
7 References.....	17

\*Environmental Policy Research Centre, Freie Universität Berlin, Ihnestr. 22,  
 14195 Berlin, email: [inken.reimer@fu-berlin.de](mailto:inken.reimer@fu-berlin.de)

# 1 Abstract

*Reducing Emissions from Deforestation and forest Degradation (REDD) in developing countries has rapidly grown in significance since it first entered the agenda of the international climate change negotiations in 2005. Despite slow progress of the international negotiations on a global post-2012 climate agreement, REDD has become a mechanism that links 15 developed and approx. 50 developing countries: developed countries act as donors, bilaterally or multilaterally channelling funds to developing countries to establish and implement forest preservation projects. This investment has the potential to reduce greenhouse gas emissions significantly. In addition REDD, if implemented effectively, has a positive impact on sustainable development at large, biodiversity conservation and poverty eradication.*

*However, despite clear progress in the general set-up of the REDD mechanism uncertainties and contested issues remain. Particularly important is the uncertainty as to the outcome of REDD; it is too early to judge whether REDD will be successful. This is relevant when it comes to the financing of REDD, which is dependent on financial transfers from donor countries. But there seems to be reluctance amongst developed countries to engage in REDD, which is attached to these uncertainties. This paper focuses on the influence of uncertainty on the framing of REDD in three selected donor countries, namely Norway, Germany and Canada.*

*This paper argues that despite increasing scientific evidence available on REDD the specific uncertainty concerning the outcome affects the framing of REDD in industrialised countries acting as donor countries. The framing of REDD varies accordingly, ranging between a climate change mitigation mechanism, development aid tool or simply economic benefits/burdens. Hence this has a particular influence on the institutional set-up within these countries and the decision-making process.*

## 2 Introduction

Uncertainty is a frequently occurring, complex concept, defined in various ways. What is commonly understood of uncertainty is that the prediction of the outcome is largely impossible. In particular political science deals with scientific uncertainty. It is suggested that scientific uncertainty poses immense challenges for policymakers, who derive legitimacy from demonstrating their capacity to take swift decisions and convey confidence about their decision-making premises. An increase of scientific evidence and knowledge of a certain issue is generally expected to decrease the degree of uncertainty.

**Reducing Emissions from Deforestation and forest Degradation (REDD+)**<sup>1</sup> derived as a concept from intensified scientific research on forests and deforestation and became an important climate change mitigation mechanism, discussed at the United Nations Framework Convention for Climate Change

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<sup>1</sup> Although the + is not suffixed throughout this paper the importance it adds to REDD, including the role of conservation, sustainable management of forests and enhancement of forest stocks in developing countries, is acknowledged and implied if not explicitly stated differently.

(UNFCCC) in 2007. A growing amount of literature have featured an increase of knowledge on REDD, which has also led to further fragmentation of its simple core idea that by protecting forests, global greenhouse gas (GHG) emissions can be significantly as well as potentially very cost-effectively reduced ( cf. Eliasch, 2008; IPCC 2007; Stern 2006;). However, many contested aspects and uncertainties remain. In particular this refers to uncertainties of what the overall effectiveness, meaning the long-term outcome of REDD may be and whether/when we will see any GHG emission reduction results as well as uncertainty of future costs and financing options for REDD.

These aspects are significant for the survival of the mechanism at large and relevant for all actors involved in REDD, developed and developing countries alike. Outside the UNFCCC we see a new regime and a colorful REDD landscape emerging, shaped by the knowledge contribution and engagement of a variety of actors. Most importantly, however, 15 developed countries act as donors, bilaterally or multilaterally channeling funds to approx. 50 developing countries. Engagement of donors is currently a premise for survival: Without their financial support no REDD mechanism would exist. But with uncertainty attached to REDD and no obvious benefit, why do developed countries engage and become donors? Incentives for engagement should be linked to the most important deliverable of REDD: quantifiable, reduced GHG emissions.

In the light of uncertainty concerning deliverables of REDD, this paper argues that uncertainty creates a scope of action. It is assumed that actors (in this case developed countries acting as donors) purposefully utilize uncertainty of REDD. The overarching question is: How does an actor utilize uncertainty and why? A model for assessing how uncertainty is utilized is developed consisting of three factors: Actor-constellation, agenda-setting and economic capacity. Before these factors are explained in detail, followed by an application of the model to the case of Norway - where uncertainty is identified as a motor for progress - and a discussion on whether / how the model can be applied to Germany and Canada to compare all three cases adequately, the paper begins by outlining knowledge construction on REDD.

### 3 Constructing Knowledge on REDD

Scientific evidence on the importance of forests can be identified as the overarching driver for the conceptualization of REDD. Forests act as giant utilities providing vital ecosystem services to the world including water storage, rainfall generation, climate buffering, biodiversity conservation and soil stabilization (Millennium Ecosystem Assessment, 2005). Forests also directly underpin the livelihoods of more than 1.6 billion people (World Bank, 2004); the majority of the world's poor and marginalized continue to be found in rural regions (Millennium Project, 2005: 16-17). Maintaining intact forest ecosystems will enable societies to adapt to the worsening impacts of climate change (CBD & GTZ, 2009).

Emission from deforestation is the second largest source of global GHG emissions. The Intergovernmental Panel on Climate Change (IPCC, 2007) has estimated that annual forest loss accounts for approximately 17 per cent of global GHG emissions. The British Stern Review (Stern 2006) confirmed this and attributed financial benefits to the reduction of deforestation; the review noted that avoided deforestation could be one of the most economical ways to reduce climate change. This was further elaborated by the Eliasch Review (2008), where the economic benefits of halving deforestation was attributed with up to 3.7 trillion USD savings in the long term. Hence reducing deforestation was suddenly perceived as a significant and potentially cost-effective option for reducing global GHG emissions whilst helping smooth the transition to a low-carbon economy (Eliasch, 2008). These scientific findings constructed a new knowledge base upon which various actors nationally and internationally began to look for policy options to deal with deforestation and the loss of carbon sinks. To attach the carbon stored in forests with an economic value and hence create financial and market incentives for developing countries to protect their tropical forests seemed appealing to many. Despite remaining – as well as newly occurring – uncertainties, decision-making on REDD is actively enforced.

### *3.1 Decision-making on REDD under uncertainty*

Scientific uncertainty is relatively often addressed in political science and in particular in the analysis of political processes (cf. Jamieson, 1996). Scientific uncertainty can be seen “not as a lack of scientific understanding but as the lack of coherence among competing scientific understandings” (Sarewitz, 2004: 386). Additionally, the same data set can be interpreted in different ways, which can produce ambiguity (cf. Wynne, 2001). In fact, Klinke and Renn (2002: 1085) argue that most disputes about uncertainty are dependent on different interpretations of what the same data means for society. These interpretations or framings can in turn result in diverging recommendations for political action. But how exactly do actors deal with uncertainty attached to REDD? For the purpose of this paper uncertainty is defined as *lack of knowledge about effectiveness and costs of REDD*.

#### **3.1.1 International agenda-setting of REDD**

The role of forests and other biocarbon sinks in the climate change regime has been amongst the most contentious issues. During the earlier negotiations of the Kyoto Protocol, the role of forest sinks divided the environmental community (Fearnside, 2001). It nearly ruined the UNFCCC Conference of the Parties (COP) in 2000 and forced an extraordinary session (“COP6-bis”) in early 2001 (Niles, 2002; Wirth, 2002). What is now known as REDD was initiated through a proposal by the governments of Papua New Guinea and Costa Rica in alliance with some other parties at COP-11 in Montreal in 2005. The proposal, originally focusing only on reducing emissions from deforestation (RED), was presented as one of the most essential means to achieve the target of limiting the global temperature rise to 2°C and to effectively deal with deforestation and the loss of carbon sinks. The Parties received widespread support for their proposal and a contact group was established to explore options for REDD.

The concept grew further to include forest degradation (REDD), and was then developed into a mechanism which adds the role of conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+)

(Minang et al., 2009). This broad definition enshrined in REDD+ was adopted by the COP in the Bali Action Plan in 2007 and is since negotiated at the UNFCCC. Including deforestation in the climate regime has provided an opening for the active participation of developing countries in emission reduction efforts under an international climate change regime (cf. Dutschke & Wolf, 2007). However, only the quick-start financing offered by developed country Parties enabled REDD to receive a widespread significance. Norway was the first country to make financial commitments to the REDD mechanism at COP-13 in Bali, where Prime Minister Jens Stoltenberg pledged up to three billion Norwegian Kroner (NOK) annually for REDD-related projects. This pledge made Norway the first developed country to include REDD as a climate change mitigation mechanism in its climate policy. Norway took the lead on REDD and began to shape the mechanism. Hence the financial commitment aimed at spurring further development and further commitment by other actors. This commitment seemed to go unaffected by the existing uncertainties.

#### 3.1.1.1 The current status of REDD at UNFCCC level

At COP-16 in Cancun in 2010 all Parties formally recognized the important role of forests in climate change mitigation (UNFCCC, 2010: III.C). As deforestation was excluded from the Kyoto Protocol, policy negotiations on REDD have mainly been carried out through the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (AWG-LCA) (cf. *ibid.*). Another COP forum for REDD negotiation has become the Subsidiary Body for Scientific and Technological Advice (SBSTA). This has focused on adopting guidance for a Safeguard Information System (SIS) on how safeguards are implemented and considered in REDD, and also examined the question of reference levels and reference emission levels for REDD. The AWG-LCA affirmed that “Parties should collectively aim to slow, halt and reverse forest cover and carbon loss, according to national circumstances, consistent with the ultimate objective of the Convention” (*ibid.*: III.C. preamble). One implication concerns financing. The AWG-LCA pledged long-term financing for mitigation, including REDD, of 100 billion USD annually by 2020, though there is ambiguity on the type of

funding mechanisms that will be used to achieve this (ibid.: IV.A.para.98). The AWG-LCA states that “funds provided to developing country Parties may come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources” (ibid: IV.A.para.99). This is reflected in the approach delivered in the Meridian Report, prepared in 2009 for the Government of Norway to support the development and implementation of REDD. It suggests combining fund-based and market-based elements, also including capacity building. This three-phased approach was adopted by the international community at COP-16 to establish a REDD mechanism.

- *1<sup>st</sup> Phase (Preparation and Readiness)*: Focus on capacity building, preparation for governance reforms in developing countries; stakeholder engagement and the building of a national strategy to address drivers of deforestation prior to the implementation of any REDD policies.
- *2<sup>nd</sup> Phase (Policies and Measures)*: Builds a national policy framework for the implementation of REDD and links it to other sectors such as agriculture, energy and development.
- *3<sup>rd</sup> Phase (performance-based payments)*: Links implementation of REDD activities to performance-based payments (emission reduction targets).

The current funding structure is closely connected to the three-phased approach; funding for REDD activities comes mainly from public sources, predominantly Official Development Assistance (ODA), contributed by the 15 donor countries. It is channeled bilaterally or via multilateral institutions to developing countries to implement forest preservation projects. So far three major multilateral funding initiatives have been established to support a global REDD mechanism; UN-REDD Programme, Forest Carbon Partnership Facility and Forest Investment Program (FIP), and some significant national and regional initiatives, such as the Congo Basin Fund, the Amazon Fund and Norway’s National Climate and Forest Initiative (NICFI). Climate Funds Update data reports that USD 570 million was approved for REDD projects between 2008 and February 2011, financing a total of 139 projects.<sup>2</sup> This equals to about 15.5 per cent of total climate finance but does not come anywhere near to the proposed financial resources estimated in the Eliasch Review.

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<sup>2</sup> <http://www.climatefundsupdate.org/projects>; accessed 21.02.2012

### 3.1.2 Framing REDD

*How do people form preferences?* This is a relevant question for a lot of research in political science. Druckman (2010) explains framing by looking at the “variable of ultimate interest: an individual’s preference” (280). Preferences over objectives derive from comparative evaluations of those, often alternative, objects. Hence frames are often used in communication studies: How frames are used in communication has an effect on public opinion of certain objects (cf. Chong & Druckman, 2007). Framing is hence closely connected to strategy, which is linked to agenda-setting: Having an issue considered by policy-makers. Tversky and Kahneman (1981) have shown that framing affects decision-making. They assert that preferences can change with different framings, so that an individual faced with the same problem in a second decision can make a contradictory decision to the first one if the problem is framed differently. But only if an issue is considered there is a chance that decision on that issue will be taken (cf. Princen, 2011). “The dynamics of participation in policy-making processes are crucially mediated by institutional factors. Policy is made in distinct institutional arenas or, in the terminology of Baumgartner and Jones (1993), ‘venues’. Hence, participation depends on the venue in which an issue is taken up” (ibid., 929). Furthermore, the decision on which venue deals with an issue is determined by the terms in which the issue is defined; framed.

Applying framing to the case of REDD it is worth assessing whether it is defined according to the objectives and benefits which aim to be highlighted by particular actors. As outlined above, REDD was foremost defined as a climate change mitigation mechanism. Hence the venue where it was negotiated was dominated by environmental/climate change actors. In this arena it was more closely connected to the economic benefits resulting from it. To frame REDD as potentially cost effective has arguably been the first predominating reason for a large-scale acceptance of the mechanism in the early years (2005-2007). As the concept of REDD became more clearly structured and actors had to deal with the question of financing the mechanism, framing became more nuanced: In particular it was suddenly conceptualised by some actors as a development aid



tool with ODA suitable for fast-start financing. This framing was further strengthened when it was realised that capacity building in developing countries is a major pre-conditions for implementing REDD projects.

The development of these two major frames (climate change & development) is important for this paper as it shows how knowledge can be constructed in the most suitable way for an actor. However, to what extent framing is linked to uncertainty is discussed later on. It should thus be kept in mind that uncertainties and hence also knowledge production can be utilized very strategically: As the future outcome of REDD remains uncertain, it might be the framing as a development aid tool that could give it a new scope. This is further elaborated in the next chapter, where the factors for analysis are introduced.

## **4 Factors for Utilizing Uncertainty**

To analyse how uncertainty can be utilized by actors, a model is developed consisting of three different factors: Actor-constellation (ac), agenda-setting (as) and economic capacity (ec). These factors are based on theoretical assumptions considered particularly relevant for the purpose of this paper. These shall be briefly outlined. The following function is adopted to illustrate the impact of the three factors on utilizing uncertainty ( $Uu$ ):  $Uu = f(ac, as, ec)$

### *4.1 Actor-constellation*

The rationale behind this factor derives from theoretical literature on types and patterns of democracy (cf. Lijphart, 1999). In particular the differentiation of consensus and majoritarian democracies is taken as an important aspect from which the actor-constellation can be derived. Consensus democracies are said to have particular advantages when it comes to 'softer' political issues, i.e. more foreign aid to less-developed countries. In addition, the division of power is important. "Constitutional structures, such as federalism-unitarianism indicators, and informal characteristics, such as relationships between government and opposition parties, may have different effects on policy" (Schmidt, 2002). Hence regime types as well as the organisation of the policy are important components influencing the particular actor-constellation.

For the purpose of this paper it is hence considered important what kind of actor-constellation we have and which (institutional) interests are represented. This relates in particular also to the representation and inclusion of non-governmental actors. It is assumed that federal systems allow a better representation of a variety of interests. As these interests, represented by actors, must be considered the decision-making takes longer but might also last for longer. Applied to REDD the following hypothesis is derived:

*The more consensual and decentralized the system, the more diversified the actor constellation, the higher utilizing of uncertainty ( $H_{ac}$ )*

Adapted to the function this would mean:  $ac^+ \rightarrow Uu^+$

## 4.2 Agenda-setting

The selection of agenda-setting as another factor for analysis derives from leadership literature. Literature on leaders and leadership is manifold, in particular concerning the role international institutions, organisations and international regimes (cf. Young, 1991, Underdal, 1994). Young and Underdal have developed four types of leadership: intellectual leadership, instrumental leadership, power-based leadership and directional leadership. Common to approaches of leadership is the reference to certain behaviours which individuals display or activities they undertake (Selznick, 1957). Hence leadership “is the persuasion of individuals and innovativeness in ideas and decisionmaking [sic] that differentiates leadership from the sheer possession of power” (Hall, 1996: 141). “According to the Dictionary of Political Analysis, leadership is what ‘enables an individual to shape the collective behavioural pattern of a group in a direction determined by his or her own values’” (Andresen & Agrawala, 2002: 41f.). Andresen and Agrawala have analysed leadership in relation to the climate regime which is an important point of departure for this analysis.

What is, however, in particular important is that leadership is here considered as the framework for both agenda-setting and also framing of an issue. A relatively novel issue that has not previously been considered by policymakers

needs strategic intervention and has to be placed in a venue in which it can be constructively discussed. If an issue is defined and knowledge on an issue is established this often implies that venues are occupied and limited space for influencing the formulation process and agenda-setting might be available. Applied to REDD the following hypothesis is derived:

*The higher previous knowledge and occupied venues, the less influence and possibility for utilizing of REDD ( $H_{as}$ )*

Adapted to the function this would mean:  $as^+ \rightarrow Uu^-$

### *4.3 Economic capacity*

This factor is less theory based than the previous two but considered essential for analysis. In particular as the financial commitment of REDD donors is essential for the mechanism at large its overall economic capacity is important. Here in particular the Gross Domestic Product (GDP) and the natural resources are important. The following hypothesis is derived:

*The higher economic factors the higher utilizing of REDD ( $H_{ec}$ )*

Adapted to the function this would mean:  $ec^+ \rightarrow Uu^+$

These three factors are in the following applied to the case of Norway to come closer to the answer How does an actor utilize uncertainty and why?

## **5 Utilizing Uncertainty: The case of Norway**

For assessing Norwegian engagement on REDD it should be kept in mind that environmental protection has ranked very high on the political agenda since 1970s while at the same time constantly looking for economic growth. Economic interests as well as environmental ambitions are part of the same coin for many Norwegian politicians. However, how does this relate to REDD?

### *5.1 Actor-constellation on REDD in Norway*

The actor constellations within each country, the distribution of institutional responsibility in pursuing REDD, and the specific interests of political actors

are considered decisive for shaping the REDD engagement. Before the specific actor constellation in the case of REDD is assessed, some more general remarks on the political system of Norway: Norway is a unitary parliamentary democracy with a constitutional monarchy. It is a *centralized system*. Currently three parties are in coalition and three further parties form the opposition.

In Norway REDD was announced publicly and included in the Climate White paper in 2007/2008. It received widespread political support (with all parties but the Progress Party agreeing on the target set out) and Stoltenberg himself was very keen to have REDD on the political agenda. In addition, Erik Solheim, Minister for Environment and development (until March 2012) promoted REDD; an inter-ministerial working group for REDD was established. Norwegian REDD engagement was right from the beginning driven by the support of NGOs. Rainforest Foundation Norway and Friends of the Earth Norway picked up on what was to become REDD even before it was discussed in Norwegian politics. It saw the 'window of opportunity' to shape REDD policy and has since been active in drafting and implementing REDD projects in developing countries. There has been no opposition to REDD amongst Norwegian NGOs although the number of actively engaged NGOs is limited. However, this strategic involvement of NGOs is unprecedented and shows a very specific representation of interests, with uncertainty leaving room for free maneuvering. With Norwegian REDD money being part of the ODA budget, the Ministry of Foreign Affairs is in charge of all financial aspects of REDD and Norad, the Norwegian Agency for Development Cooperation, further distributes money for REDD research. At the same time the Norwegian Ministry of Environment is in charge of administrating REDD projects. This inter-ministerial location indicates REDD in Norway as situated in the area of responsibility of both development aid as much as climate change.

Concerning  $H_{ac}$  (*The more consensual and democratic the system, the more diversified the actor constellation, the higher utilizing of uncertainty*) the application to the case of Norway has shown that although it is not a federal but a centralized political system, many actors are involved when it comes to REDD. However, the

political process apart from the very first initiating by the NGOs is very much a top-down approach, with Stoltenberg himself being highly engaged. Hence the hypothesis is only partly verified by this analysis.

## *5.2 Agenda-setting on REDD in Norway*

Norway first became internationally recognized for its environmental engagement when the Brundtland Commission, chaired by Norway's Prime Minister Gro Harlem Brundtland, published its report "Our Common Future" in 1987 on the concept of sustainable development. "When the Norwegian Parliament discussed a national strategy to follow up the recommendations from the Brundtland Commission in spring 1989, the Brundtland government proposed a goal of stabilizing CO<sub>2</sub> emissions at the national level by the year 2000" (Lundli & Reitan, 2004: 140). To achieve this goal a CO<sub>2</sub>-tax was introduced in 1991, which served as the main climate policy instrument until 2007 (cf. Gullberg, 2008). During the negotiations for a Kyoto Protocol Norway, in line with the US government appeared strongly in favor of flexible mechanisms. Consequently, emission trading became the alternative to a CO<sub>2</sub>-tax in Norway as it "allowed them to substitute expensive domestic mitigation measures with cheaper emissions reductions abroad" (Bang, 2004: 210). Prime Minister Stoltenberg has always advocated emissions trading and he has appeared as a leader for securing financial transfers from industrialized countries to developing countries.

This agenda-setting behavior was also exercised by Stoltenberg in 2007, pushing REDD forward nationally and internationally. "The Norwegian government realized REDD was a field which needed leadership in order to kick start the process," Hans Brattskar, ambassador and director of the Norwegian government's International Climate and Forest Initiative. "Norway, by making significant initial contributions, could be catalytic in the sense that we could start building the international framework needed to make it easier for other countries to follow." Norway has influenced the international agenda-setting process on REDD, contributing not only financially but also organizing conferences and calling for further research (cf. Reimer, 2012). Norwegian

action was driven by the belief that REDD was the most effective, and cheapest, way to significantly reduce global GHG emissions. However, it was paired with the belief that REDD as additional ODA would do something good for the world. Hence strategic and altruistic interests were part of the same coin. This strategic framing of REDD as a development aid tool has had a large impact on the overall conceptualization of the mechanism and also the acceptance at home. It also implies that a new venue was found through which further action could be exercised.

Applying  $H_{as}$  (*The higher previous knowledge and occupied venues the less influence and possibility for utilizing of REDD*), the assessment has shown opposite results. Although the hypothesis has been falsified the overall importance of the agenda-setting process is immense. As REDD was unknown a new niche was occupied by early Norwegian action. This also meant that room for framing was given and Norway was able to utilize uncertainty on REDD in the way that with ODA it provided a new framework for financing provided different incentives for engagement. It was also possible for the Norwegian government to purposefully influence the knowledge construction process by commissioning reports and studies on the overall framework of REDD.

### *5.3 Economic capacity for REDD in Norway*

According to the International Monetary Fund (IMF) Norway in 2011 had the highest Gross Domestic Product (GDP) with USD 501.582 billion. This means a GDP per capita of 99.66, the world's fourth highest. So far Norway has spent USD 277.09 million on REDD, which is a benign amount considering the overall wealth of the country. The countries' wealth comes largely from the petroleum (oil and gas) sector. Economic interests and further development rank high in Norway and in particular the petroleum sector has a significant share in Norwegian economic uprising since the first oil field was exploited in the 1970s. "In 2010, the petroleum sector represented 21 per cent of the country's total value creation. Value creation in the petroleum industry is more than double that of land-based industry, and about 15 times the total value creation in the

primary industries” (Ministry of Petroleum & Energy, 2011: 22).<sup>3</sup> At the same time 30 per cent of Norwegian CO<sub>2</sub> emissions in 2009 originated from petroleum activities (ibid); the largest share of the overall GHG emission of 50.8 million tonnes (CO<sub>2</sub> equivalents) in 2009 (Statistics Norway, Climate and Pollution Agency ). However, the decrease of 2008 and 2009, according to the Climate and Pollution Agency (Klif) directly linked to the financial crisis, was followed by a new increase of 4.8 per cent in 2010, amounting for 53.7 million tonnes CO<sub>2</sub> equivalents, of which 13.8 million tones are produced by oil and gas extraction (cf. Klif).

“According to Norway’s commitment under Kyoto Protocol, emissions shall not be more than one per cent above the 1990 level in the period 2008-2012, taking trade with quotas, joint implementation and/or the clean development mechanism into account” (Klif). However, emissions rose by around 11 per cent from 1990 to 2007 and were 2 per cent above 1990 levels at the beginning of 2010. The significant increase of greenhouse gas emissions in Norway is closely linked to the economic development and hence a significant increase in energy consumption. These figures clarify; Norway is dependent in international cooperation to achieve its emission targets in particular if the government intends to stick to the reduction of GHG emissions of 40 per cent of its 1990 emissions by 2020 and even become carbon neutral by 2030, albeit depending.

Concerning  $H_{ec}$  (*The higher economic factors the higher utilizing of REDD*) the above presented figures indicate a correlation of economic capacity and financial activities. Hence the hypothesis is verified. Despite uncertainties attached to REDD this does not seem to have any negative impact on financial commitments. It can be assumed that the need for CO<sub>2</sub> reductions and the availability of large scale funding for a mechanism such as REDD provide large scope of action.

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<sup>3</sup> At the same time the value creation amounts for more than 500 billion Norwegian kroner, according to National accounts, Statistics Norway and the State receives a considerable income from petroleum activities, which is transferred into the Government Pension Fund – Global (SPU), which in 2010 totalled approximately NOK 186 billion with a total value of NOK 3 077 billion. The SPU was established in 1990 to ensure a long-term perspective for the Government’s petroleum income. It now corresponds for NOK 600 000 for every Norwegian.

## 6 Discussion

Assessment of actor-constellation, agenda- setting and economic capacity have shown that in the case of Norway these factors can be seen as influencing REDD engagement. Scope of uncertainty is utilised for action, and hence becomes a motor for progress on REDD. This is in particular connected to the framing of REDD via co-benefits, mainly as a development aid tool. Uncertainty is neither mentioned nor can be identified as a hindering force. Quite the opposite: We see a window of opportunity for action on REDD. In particular the knowledge construction process is strategically employed by the Norwegian government to be perceived as a leader on REDD.

While Norway is considered as a leader on REDD, Germany is considered more of a follower and Canada is perceived as a laggard due to their limited financial commitment to the REDD mechanism. The USD 41 million donation to the World Bank's FCPF is only a very small amount. However, Canada as well as Germany show very similar pre-conditions for engagement in REDD as Norway. Both countries have a similar economic capacity: They are highly industrialized and have a high GDP. Canada even has natural resource richness as well as a high per capita CO<sub>2</sub> emission. The fact that they do less on REDD leaves room to suggest that it does not only depend on high economic capacity but for it to be extremely high to give large financial contributions to a mechanism such as REDD. Uncertainty is not utilized but could be a hindering factor.

Similarly the actor-constellation: Both Canada and Germany are federal states. This could have a negative impact on utilizing uncertainty. However, in Germany the early reluctance on REDD is loosened and a broader set of actors and interests is included in the discussions on REDD. In addition, in Canada NGOs are definitely not included in the decision-making process on REDD. In Germany the actor-constellation is unclear, indicating the involvement of NGOs but at the same time the policymakers keep their official involvement limited.



The agenda-setting factor shows in Canada a very different set of policy priorities of the government. It even looks as if any ambition on environmental leadership that Norway, Germany and Canada had in common during the first two decades of international environmental negotiations is purposefully given up by Prime Minister Stephen Harper. Not even framing REDD as a development aid tool seems to be of any interest. In Germany it is a more nuanced picture and in particular the Ministry of Environment is active on the ground, in developing countries, to improve the knowledge on REDD.

Although a detailed analysis of Canada and Germany is still missing, preliminary testing of the model developed for utilizing uncertainty is suggested to give explanations to different engagement in REDD. Norway as the first test case has shown that uncertainty can indeed be utilized to provide scope for action and in particular influence the framing of REDD at large. Hence knowledge on REDD is constructed to suit the needs of the actor.

## 7 References

- Andresen, S. and Butenschön, S. (2001) *Norwegian Climate Policy: From Pusher to Laggard?* In: *International Environmental Agreements: Politics, Law and Economics* **1**, 337–356.
- Andresen, S. and Agrawala, S. (2002) *Leaders, pushers and laggards in the making of the climate regime*. In: *Global Environmental Change* **12**, 41–51.
- Andresen, S. and Skodvin, T. (2006) *Leadership Revisited*. In: *Global Environmental Politics* **6** (3), 13–27.
- Angelsen, A. (2009) *Realising REDD+*. Bogor Barat: Center for International Forestry Research.
- Bang, G. (2004). *Sources of influence in climate change policymaking: A comparative analysis of Norway, Germany, and the United States*. Ph.D., Department of Political Science, University of Oslo.
- CBD & GTZ (2009) *Biodiversity and Livelihoods: REDD benefits*. Eschborn: GTZ.
- Chong, D. and Druckman, J.N (2007) *Framing Public Opinion in Competitive Democracies*. *American Political Science Review* **101**, 637–656.
- Druckman, J.N. (2010) *What It's All About? Framing in Political Science*. In G. Keren *Perspectives on Framing*. Taylor & Francis. 279–302.
- Dutschke, M. and Wolf, R. (2007) *Reducing emissions from deforestation in developing countries: the way forward*. GTZ, Deutschland.  
URL: <http://www.gtz.de/de/dokumente/en-climate-reducing-emissions.pdf>.
- Eliasch, J. (2008) *Climate Change: Financing global forests*. *The Eliasch Review*. London: Earthscan.
- Fearnside, P.M. (2001) *Saving tropical forests as a global warming countermeasure: an issue that divides the environmental movement*. In: *Ecological Economics* **39**, 167–184.
- Gullberg, A. T. (2008) *Lobbying friends and foes in climate policy. The case of business and environmental interest groups in the European Union*. *Energy Policy*, **36** (8), 2954–2962.
- Hall, R. H. (1996) (6<sup>th</sup> Ed.) *Organizations: Structures, Processes and Outcomes*. Upper Saddle River, NJ: Prentice-Hall.
- IPCC (2007) Working Group III. Technical Summary, *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the IPCC*. Cambridge: Cambridge University Press.

- Jamieson, D. (1996) *Scientific Uncertainty and the Political Process*. In: *Annals of the American Academy of Political and Social Science* **545**, 35–43.
- Klif (2010) URL: <http://www.environment.no/Topics/Climate/Norways-climate/>
- Klinke, A. and Renn, O. (2002) *A New Approach to Risk Evaluation and Management: Risk-Based, Precaution-Based, and Discourse-Based Strategies*. In: *Risk Analysis* **22** (6), 1071–1094.
- Liefferink, D., Arts, B., Kamstra, J., Ooijevaar, J. (2009) *Leaders and laggards in environmental policy: a quantitative analysis of domestic policy outputs*. In: *European Public Policy* **16** (5), 677–700.
- Lijphart, A. (1999) *Patterns of democracy*. New Haven: Yale University Press.
- Lundli, H.-E. and Reitan, M. (2004) *Climate Change: Cost effectiveness Abroad, Possibilities at Home*. In: J.B. Skjærseth (ed.) *International Regimes and Norway's Environmental Policy: Crossfire and Coherence*. Aldershot: Ashgate, 135–161.
- Millennium Ecosystem Assessment (2005) *Our human planet: summary for decision-makers*. Washington, DC: Island Press.
- Millennium Project (2005) *Investing in Development: a practical plan to achieve the Millennium Development Goals*. New York: UNDP.
- Minang, P.A., Jungcurt, S., Meadu, V., Murphy, D. (2009) *The REDD Negotiations: moving into Copenhagen*. Winnipeg & Ottawa: International Institute for Sustainable Development.
- Niles, J. O. (2002) *Tropical forests and climate change*. In S.H. Schneider, A. Rosencranz, J.O. Niles (Eds.), *Climate Change Policy: a survey*. Washington, DC: Island Press, 337–371.
- Norwegian Ministry of Petroleum and Energy (2011) *FACTS. The Norwegian Petroleum sector 2011*.
- Princen, S. (2011) *Agenda-setting strategies in EU policy processes*. *Journal of European Public Policy*, **18** (7), 927–943.
- Reimer, I. (2012) *Seeing the Forest for the Trees: Drivers & Barriers for REDD*. In: *FNI Climate Policy Perspectives* **4**.  
URL: <http://www.fni.no/climatepolicy/perspectives/FNICPP-04.html>
- Sarewitz, D. (2004) *How science makes environmental controversies worse*. In: *Environmental Science & Policy* **7**, 385–403
- Schmidt, M. (2002) *Political performance and types of democracy: Findings from comparative studies*. In: *European Journal of Political Research* **41**, 147–163.
- Selznick, P. (1957) *Leadership in Administration: A Sociological Interpretation*. Berkeley: University of California Press.
- Stern, N. (2006) *The Stern Review: The Economics of Climate Change*.  
URL: [http://webarchive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/stern\\_review\\_report.cfm](http://webarchive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm)
- Stoltenberg, J. (2011) *Deforestation and climate change financing are main themes in Cancun*. Norwegian Ministry of Foreign Affairs. URL: <http://www.norway.or.id/>
- Underdal, A. (1994) *Leadership Theory: Rediscovering the Arts of Management*. In: *International Multilateral Negotiations: Approaches to the Management of Complexity*. 178 – 197.
- UNFCCC (2007) *Bali Action Plan*. URL: <http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=3>.
- UNFCCC (2010) *Draft decision -/CP.16 Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention*. Bonn: UNFCCC.
- UNFCCC (2011) *Draft decision -/CP.17 Outcome of the work of the Ad Hoc Working Group on long-term Cooperative Action under the Convention*.  
URL: [http://unfccc.int/files/meetings/durban\\_nov\\_2011/decisions/application/pdf/cop17\\_lcaoutcome.pdf](http://unfccc.int/files/meetings/durban_nov_2011/decisions/application/pdf/cop17_lcaoutcome.pdf).
- Wirth, D.A. (2002) *The Sixth Session (Part Two) and Seventh Session of the Conference of the Parties to the Framework Convention on Climate Change*. *American Journal of International Law* **96**, 648–660.
- World Bank (2004). *Sustaining Forests: A Development Strategy*. Washington, DC: World Bank.
- Young, O.R. (1991) *Political Leadership and Regime Formation: On the Development of Institutions in International Society*. In: *International Organization*, **45**(3), 281–308.
- Young, O.R. (1999) *Comment on Andrew Moravcsik, 'A New Statecraft? Supranational Entrepreneurs and International Cooperation'*. In: *International Organization*, **53**(04), 805–809.