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elisabeth\_dalene@hotmail.com

Noragric  
Department of International Environment and Development Studies  
P.O. Box 5003  
N-1432 Ås  
Norway  
Tel.: +47 64 96 52 00  
Fax: +47 64 96 52 01  
Internet: <http://www.umb.no/noragric>

**Declaration**

I, Elisabeth Dalene, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature.....

Date.....

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## **Abstract**

REDD+ has become a hot issue in the climate change policy. It is seen as one way to reduce global GHG emissions by slowing and potentially reversing deforestation and forest degradation. The Amazon Fund is today seen as the only full REDD+ governance structure in the world. Thus, I was interested in doing a deeper study of this governance structure in order to learn about the strengths and weaknesses of the Fund as a REDD+ governance structure. In order to answer this objective four research questions have been made. The method used in order to answer this objective has been qualitative. It is based on written material about the Fund and its activities and a series of independent interviews with people engaged in the REDD+ process in Brazil.

I found that there are both important strengths and important weaknesses in the Brazilian REDD+ governance system. The overall political legitimacy of the system is argued to be an advantage. The steering committee is an important part of this. However, lack of transparency lower the political legitimacy. Another advantage with this system is the well-known and experienced monitoring system of deforestation, by the national institute of space research, and which is also used in the Fund's monitoring, reporting and verification system. A third advantage is that the Fund seems to be well integrated into the overall national deforestation policy. However, there are also weaknesses regarding the Fund in relation to the national deforestation policy. The Fund is small in size and does not seem to focus on the critical drivers of deforestation. The governance system does not include reduction of emissions from degradation, and other biomes should also be taken more into consideration. The system of money flow in the Amazon Fund can also be seen as a weakness. One system decides whether and how much money should be donated to the Fund. The other is the money to the projects. This system however, depends on the input to the Fund rather than on the performance of the project. BNDES follows its own routines for loan activities when they approve donation activities. This has affected the type of projects that are being approved. Additionality of projects approved does not seem to have a focus in the Fund.

To conclude, this governance system has some advantages. However, in order for this system to continue to be used as the national REDD+ governance system, there are different things that should be improved. Some weaknesses may be easier to deal with than others. Adding measure of reduction of emissions from degradation may be easier to do than changing the habits of BNDES, as the change of BNDES' habits is likely to be a slow process.

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## **List of Abbreviations and Acronyms**

ARPA	The Amazon Region Protection Areas project
ADR	Average Deforestation Rates
BNDES	The national development bank in Brazil (Banco Nacional de Desenvolvimento Econômico e Social)
CAR	Database land registration (Cadastro Ambiental Rural)
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CO <sup>2</sup>	Carbon dioxide
COFA	The steering committee of the Amazon Fund (Comitê Orientador do Fundo Amazônia)
CTF	Conservation Trust Fund
CTFA	The technical committee of the Amazon Fund (Comitê Técnico do Fundo Amazônia)
COP	Conference of the Parties
DEGRAD	Mapping of forest degradation in the Legal Amazon (Mapeamento Degradação Florestal na Amazônia Brasileira)
DETER	The deforestation detection in real time (Detecção de Desmatamento em tempo real)
FBOMS	The Brazilian forum for NGOs and social movements for development and environment (Fórum Brasileiro de ONGs e Movimentos Sociais para o meio ambiente e o desenvolvimento)
EF	Emission factor
FAS	Sustainable Amazonas Foundation (Fundação Amazonas Sustentável)
FASE	Federação de Órgãos para Assistência Social e Educacional
Funbio	Brazilian Biodiversity Fund
GHG	Greenhouse gas
IFT	Tropical forest institute (Instituto Floresta Tropical)
Imazon	Amazon Institute of People and the Environment
INPA	National research institute of the Amazon (Instituto Nacional de Pesquisas da Amazônia)
INPE	National institute of space research (Instituto Nacional de Pesquisas Espaciais)

IOV	Instituto Ouro Verde
IPAM	National environmental institute of the Amazon (Instituto de Pesquisa Ambiental da Amazônia)
IPCC	Intergovernmental Panel on Climate Change
MMA	The Ministry of Environment (Ministério de Meio Ambiente)
MUSA	Museum of the Amazon (Museu da Amazônia)
MRV	Monitoring, Reporting and Verification
NGO	Non-governmental organizations
Norad	Norwegian Agency for Development Cooperation
PA	Protected area
PAM	Policies and Measures
PAS	Sustainable Amazon plan (Plano Amazonas Sustentável)
PES	Payment for the environmental services
PPCDAM	Plan of Action for the Prevention and Control of Deforestation in the Legal Amazon (Plano de Ação para a Prevenção e Controle do Desmatamento na Amazônia Legal)
PPG7	Pilot program to conserve the Brazilian rainforest (Programa Piloto para a Proteção das florestas tropicais do Brasil)
PRODES	Programme of monitoring deforestation in the Amazon (Programa de Cálculo do Desflorestamento da Amazônia)
REDD+	Reduction of Emissions from Deforestation and Degradation, including enhancement of carbon stocks
SFB	Brazilian forest service (Serviço Florestal Brasileiro)
TNC	The Nature Conservancy
UNFCCC	United Nations Framework Convention on Climate Change
WWF	World Wide Fund for Nature

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## **Chapter 1 Introduction**

Deforestation is an important cause of greenhouse gas emissions in the world today. Studies show that 12-20% of the total global CO<sub>2</sub> emissions are caused by deforestation (Hall 2008). As a result of this, deforestation has gained a lot of attention in the climate change arena. Both on a national level in Brazil and globally, reduction of emissions from deforestation and degradation are seen as an important measure to combat climate change. In 2005 the concept of reduction of emissions from deforestation and degradation with enhancement of carbon stocks (REDD+) started to be developed, where only reduction of emissions from deforestation was first introduced and this happened at the 11th edition of Conferences of the Parties (COP 11) of the United Nations Framework Convention on Climate Change (UNFCCC). The REDD+ concept has gone from only focusing on emissions from deforestation to also include avoided degradation and enhancement of carbon stocks. REDD+ is thought of being part of a post-Kyoto agreement as countries and other actors will compensate developing countries for reduction in emission from deforestation in their tropical forests.

The Amazon Fund (also referred to as the Fund in this thesis) was being developed and created during the same period as REDD+ has been developing. This fund was created by the federal government of Brazil as an instrument by the government to be compensated by international actors for reducing deforestation. Already reduced deforestation will also be compensated for. The objective of this thesis is to look at the fund in order to see strengths and weaknesses of the fund as a REDD+ governance system.

### **1.1 Reduction of Emissions from Deforestation and Degradation, and enhancement of carbon stocks**

Countries with tropical forests, which are mainly the countries with the highest rate of deforestation in the world, will be paid by the international community to reduce their emissions from deforestation and degradation. The idea is that they will be paid by letting the forest stand. In addition to this, they will also be paid to conserve ecosystems and increase

their carbon stocks in the forest. This is what can be described as REDD+ (Forest Industries 2011; Vatn and Vedeld 2010).

After some years of discussions around the development of REDD+, there was made an agreement at COP16 in 2010 “to slow, halt, and reverse forest loss and the related emissions in developing countries” (Austin et al. 2010). However, all the details within the agreement remain to be agreed on and will be looked at this year. Thus, further things need to be looked at before UNFCCC can approve REDD+ actions in the different countries (ibid).

When REDD+ countries will establish a REDD+ mechanism, there are three different phases that the mechanism can fit within in each country. This is what the literature calls a phased approach (Wertz-Kanounnikoff and Angelsen 2009). Discussions from COP16 ended up with the conclusion that the phased approach will be necessary for implementation of REDD+ (Austin et al. 2010). The first phase is called readiness and will help the country to start the process of establishing a national REDD+ strategy. In this phase there will be a focus on inclusive multi-stakeholder consultations, starting to improve monitoring, reporting and verification (MRV) systems and also to begin demonstration activities. The next phase is called “more advanced readiness”. In this phase there is a focus on policies and measures (PAMs) in relation to reduction of emissions. The last phase is called “compliance” and in this phase the country is fully developed to be compensated for REDD+. The funding in these phases may vary and it is only in phase three that “direct financing by compliance markets becomes feasible” (Wertz-Kanounnikoff and Angelsen 2009:16). Hence, public funding is most relevant for countries that will be within the two first phases.

REDD+ appears to be a cheap way to reduce greenhouse gas emissions. There are however, several issues and problems arising. Corruption, weak governments and unclear REDD+ design are only some issues that need to be dealt with. Other issues could be problems related to effectiveness, efficiency and co-benefits should be dealt with in each country. Effectiveness is related to leakage control, additionality and permanence. Co-benefits are mainly enhancement of biodiversity, poverty alleviation and sustainable livelihood (Angelsen 2009).

## **1.2 The Amazon Fund**

The federal government in Brazil created the Amazon Fund in 2008. This was based on the decision by the federal government to reduce deforestation in the Amazon by 80 % “below its historic baseline over the next ten years” (McNeish et al. 2010). Thus, the Amazon Fund was created as a decree (Decree 6527) by the government. The two donors so far are Norway and Germany. Norway is donating US\$ 1 billion in total. Germany, who signed a contract with Banco Nacional de Desenvolvimento Econômico e Social (BNDES) in December 2010, is donating US\$ 30.6 mill in total (Donation Agreement 2008; Portal Brasil 2010). This money will be based on performance of reduced emissions from deforestation and degradation (Donation Agreement 2008). The Amazon Fund gives non-reimbursable support to projects to prevent, monitor and combat deforestation. The fund also supports projects that work for sustainable use and preservation of the Amazon. In addition to this, the fund is supposed to focus on development of systems for monitoring deforestation in other biomes outside the Amazon, both within and outside Brazil. 20 % of the resources can be used to this (Donation Agreement 2008). The resources received by the international donors will be used to support different types of projects and state- and local programs.

The agreement between The Amazon Fund and Norway states that the fund will receive money corresponding to the amount of emission from deforestation and degradation that is reduced. This agreement will last from 2009-2015. Payments will be transferred to the fund every sixth month. BNDES can request payments more often according to the needs of the projects and reduced emissions from deforestation and degradation. BNDES gives a certificate to the donor showing how much gas emission from deforestation and degradation that has been reduced (ibid).

## **1.3 Problem statement and justification**

This thesis will look at the national REDD+ governance system in Brazil. As for today, only the Amazon Fund can be included in the national REDD+ governance system. Thus, I will be

looking at the Amazon Fund specifically. It would be interesting to look deeper into the structure of the fund to find out to what type of fund the Amazon fund is and what strengths the fund has. By doing that, this thesis will look at which actors are involved and how these actors interact with each other. There are made some temporarily REDD+ governance system criteria that I will use to compare the fund with in order to be able to identify the strengths and weaknesses of the fund in relation to REDD+. The strategies of the fund will be looked at in order to find out the fund's intentions of how to deal with the issue of reduction of deforestation. This will include both comparing the strategies to the national deforestation policies and also find out how the fund is planning to use the resources. It is also important to look at the grassroots level to see how the resources are actually being used. This will be related to what types of projects are being approved and the projects' motivation for applying for the resources. By looking at these issues, the thesis will be able to get a complete picture about the structure of the fund. From that it will be able to find the strengths and weaknesses of the fund as a REDD+ governance system.

#### **1.4 Research objective and research questions**

On the basis of the above I have formulated the following main research objective: What are the strengths and weaknesses of the Amazon Fund as a REDD+ governance system?

Thus, there have been stated four research questions:

1. What are the main characteristics of the governance system of REDD+ in Brazil?
  - Why did the Brazilian government choose the fund solution as it is today?
  - What kind of governance system is the Brazilian governance system for REDD+?
  - How are the competencies, capabilities and authority distributed between the various sections involved?
2. What are the strategies of the Amazon Fund?
  - How well is the Amazon Fund integrated in the overall federal deforestation policy and what are the core strategies?
  - What are the criteria set to approve projects?
  - What types of activities are up till now being supported?



- What kind of MRV system has the fund established to control the deforestation and the projects to make sure that the projects fulfill the contracts?
3. What characterizes the approved projects?
    - Why did the different projects apply?
    - How well do the projects fit the strategies of the Amazon Fund?
    - How does the project administration follow up on the development of the projects?
  4. Does the Amazon Fund function well to the REDD+ governance system criteria?

### **1.5 Thesis structure**

To be able to answer this question the thesis will first look at some necessary background information. Further, the thesis will look at and discuss the theory. This will mainly be theory of governance systems, theory of governance systems in relation to REDD+, institutional change and monitoring, reporting and verification (MRV) systems. The next chapter will describe the methods used to collect data and how the analysis is undertaken. Thereafter the analysis chapter follows. Here I will respond systematically to the various research questions. The next chapter will be a discussion of the findings. At the end a conclusion will be stated.

## **Chapter 2 Background**

This chapter will look into some background information for the analysis and discussion of this thesis.

### **2.1 The history behind REDD+**

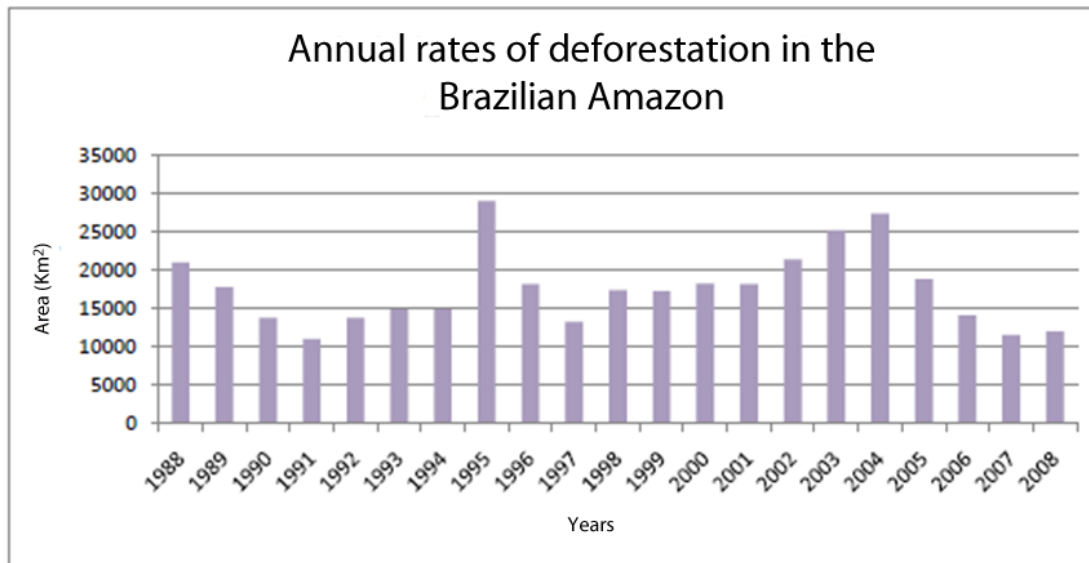
Forest carbon projects were first introduced through the Clean Development Mechanism (CDM) (Hall 2008). CDM was introduced as one of three market-based carbon trading mechanisms under the Kyoto Protocol in 1997. Under CDM countries that must reduce their CO<sub>2</sub> emissions can do that by introducing projects in developing countries. These projects must be concentrating on reducing emissions. CDM then allow these projects to get certified emission reduction (CER) credits which they can sell. One such credit is equal to 1 ton of CO<sub>2</sub> (UNFCCC 2010). Forest carbon projects are limited only to reforestation and afforestation projects (Boyd, Gutierrez and Chang 2007). This includes restoration of degraded land. These projects are based on environmental services (Hall 2008). However, what is not included in CDM is avoided deforestation. This is where REDD+ comes in. REDD+ is “an umbrella term for local, national and global actions that reduce emissions from deforestation and degradation, and enhance forest carbon stocks in developing countries” (Angelsen 2009:2). The plus sign refers to the enrichment of carbon stocks (Angelsen 2009). In other words, it looks at maintenance of standing forest or avoided deforestation and degradation (Hall 2008).

In 2003 Márcio Santilli and some work colleagues started to develop the idea of REDD+, asking why “can't poor countries be rewarded for reducing their rates of deforestation”? (Downie 2009). REDD+ is not part of the Kyoto Protocol and CDM, however it is hoped to become part of a post Kyoto agreement (Davis 2008). In 2005 the first ideas about REDD+ were discussed at a COP meeting. At this point, they were only focusing on reduction of emissions from deforestation (RED), whereas the terms degradation and enhancement of carbon stocks become included later in the process. At the COP 11 in 2005 they based the discussion of RED on article 2 in the Kyoto Protocol, which states that “protection and enhancement of sinks and reservoirs of greenhouse gases not controlled by the Montreal Protocol, taking into account its commitments under relevant international environmental agreements; promotion of sustainable forest management practices, afforestation and reforestation;” (Holloway and Giandomenico 2009:8). The concept was further developed

into REDD at COP-13 in Bali in 2007 when it became clear that degradation was also a big problem in some countries. The additional “D” in REDD is degradation, or avoided degradation. At this stage, REDD was only reducing negative changes. Further discussions lead to an agreement that it is also important to enhance positive changes, like conservation and restoration of forests. This led to the addition of the + sign to the concept in COP-14 in Poznan in 2008. There are arguments whether or not afforestation and reforestation should eventually become part of REDD+ or not. Since it is already part of the CDM, some argue that these two mitigation options should not be included in REDD+. Some argue that forest plantations, as some of the reforestation and afforestation projects include, should not be part of REDD+ as the conservation of biodiversity may be reduced. On the other hand, there are some that are disagreeing with this. They believe that forest plantations should be included in REDD+ as there would be one global unit only working with changes in terrestrial carbon stocks (Wertz-Kanounnikoff and Angelsen 2009).

## **2.2 General status of deforestation in Brazil**

In Brazil there have been high deforestation rates over several years, with 1995 and 2004 as peak years for the deforestation in the Amazon since Brazil started measuring the deforestation in 1988. An area of 130 000 km<sup>2</sup> was deforested in the Brazilian Amazon between 2000 and 2005 (Börner et al. 2010). This made Brazil to put deforestation high up on the agenda in 2004/2005. With a contribution from several deforestation policies, Brazil has managed to reduce deforestation by 76.5 % from 2005 to 6451 km<sup>2</sup> in 2009/2010 (INPE 2010). In Figure 1 the deforestation rates of the Brazilian Amazon is shown throughout two decades, from 1988 to 2008.



**Figure 1 Deforestation rates in the Brazilian Amazon from 1988 to 2008. Source: MMA (2008)**

As shown in the graph, there was a large reduction in the deforestation in 2005 and 2006. The beginning of 2007 also showed positive results of reduced deforestation. But towards the end of 2008 there is an increase in the deforestation rates. According to Börner et al. (2010), it was hoped that political actions had managed to reduce the deforestation through more improved licensing and a better control of illegal deforestation among other actions. The increasing rates towards the end of 2007 may be due to the recovery of soy and meat prices. This show that there are several factors that control the rate of deforestation, not necessarily only policies (ibid).

### **2.3 Drivers of deforestation**

There are several and complex factors that lead to deforestation in the Brazilian Amazon. The main drivers are ranching and soy and other agricultural productions. Logging has been a direct driver for degradation and an indirect driver for deforestation (Wunder et al. 2008). This section will focus mostly on ranching and soy as they are the most important drivers in the Brazilian Amazon.

The main forces behind the expansion of ranching were in the 70s to the 90s mostly caused by domestic demand of meat. However, after 2000 international demand for Brazilian meat has

increased substantially. The Brazilian meat market may have become increasingly popular on the international market because of the lack of animal diseases, like foot and mouth disease, mad cow disease etc. In addition to this the Brazilian currency has experienced devaluation (ibid). Brazil is now one of the main exporters of both agricultural and food products in the world (Barona et al. 2010). The price of beef often correlates with the deforestation rate in the Amazon. The total herd in Brazil had a peak in 2004. This also correlates with the peak of deforestation in 2004. During the period from 2005-2007 there was a decline in the herd. This includes a loss in many cows. Ranching can be seen as the principle cause of deforestation (Wunder et al. 2008).

There have been and are discussions whether soybean can be seen as a driver to deforestation. Soybean farmers mostly use degraded pasture land and cannot be seen as a direct driver. Some argue that soybean can be seen as a key indirect driver as the soybean farmers displace the ranchers indirectly further into the Amazon. This is because the production of soybean increase the value of the land and this is an incentive for the ranchers to sell their land to the soybean producers and find land further into the Amazon. In this way the soybean farmers cause ranchers to convert the forest into new pastures (Wunder et al. 2008). Others state that soybean should not be included as a main indirect driver of deforestation in the Brazilian Amazon. However, studies done by Barona et al. (2010) that was done in order to try to clarify this discussion, argue that soybean can be seen as a main indirect driver. They use Mato Grosso as an example. Mato Grosso is one of the states in Brazil with highest rates of deforestation and where also a growth of soybean production has been increasing after 2000. This study shows that the new soybean farmers do indeed push the ranchers further up into the Amazon. In addition to this, they also argue that soybean production may be an indirect driver of other reasons as well. Cattle ranching normally exist in vast areas. Soybean production on the other hand, causes expansion of new infrastructure and this is influenced by policies. With better infrastructure more farmers are likely to arrive in the area, and this may lead to further soybean production. The soybean production has also pushed the land prices in the Amazon upwards and have made possible for cattle ranchers to buy land even further into the Amazon by selling their old land (Barona et al. 2010). This study shows the complexity of the drivers of deforestation in the Brazilian Amazon, and it is then difficult to make a simple argument that soybean ranching not is an indirect driver of deforestation.

Soybean may not be a fit crop to grow in the Amazon due to the rainforest climate. However, scientists came up with a new variety that manages to grow in the more difficult areas. This

became popular after 2000 and may be part of the reason why soybean is an indirect driver (McNeish et al. 2010).

Other drivers of deforestation are the development of infrastructure, hydroelectric power and mining activities (McNeish et al. 2010). Policies are also seen as drivers of deforestation. There have been given subsidies to farmers and others that encourage them to cut the forest. Low enforcement of the laws and lack of land registry are other drivers linked to politics (Fearnside 2008).

## **2.4 Federal deforestation policies and the importance of civil society**

As a consequence of the increasing deforestation rates and the international interest in reducing deforestation and climate change, the Brazilian government made a working group in 2003 in order to come up with a plan to reduce deforestation and to use the forest in a sustainable way. The result was Plano de Ação para a Prevenção e Controle do Desmatamento na Amazônia Legal (PPCDAM) that was created in 2004 and Plano Amazonas Sustentável (PAS), approved in 2008. A national plan on climate change is being created by the Brazilian government in order to tackle with the challenges of climate change. As the national plan on climate change is not completely approved yet, and PPCDAM and PAS were the first concrete policies to be approved on deforestation reduction, this thesis will focus mostly on these.

### **2.4.1 PPCDAM**

PPCDAM focuses on prevention and control of deforestation in the Legal Amazon<sup>1</sup>. This plan has three main focuses. The first one is about agrarian and territorial planning. The second

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<sup>1</sup> Amazon biome is demarcated only around the rainforest ecosystems. The Amazon biome is 4.2 million km<sup>2</sup>. The legal Amazon on the other hand, is a political term which encompasses the nine states that is taking part of the Amazon biome and is also being used in socio-economic studies (Simon and Garagorry 2005). This includes the states of Amazonas, Mato Grosso, Maranhão, Tocantins, Acre, Pará, Rondônia, Roraima and Amapá. Legal Amazon is 5.1 million km<sup>2</sup> (Bunge 2011).

concerns monitoring and control for deforestation and the third focus concerns fostering sustainable production activities (MMA 2008b). These policies have produced several actions between 2004 and 2008. They created 148 new protected areas, including ratification of 10 million hectare as indigenous lands and 50 million hectares of federal and state protected areas (McNeish et al. 2010; MMA 2008b). The Real Time Deforestation Detection System started to be published online. New enforcement methods became a more important factor to control deforestation and more than 700 people got arrested due to illegal exploitation of the forest, including illegal deforestation and other similar crimes. Another achievement of PPCDAM is the creation of the Public Forest Management law (MMA 2008b), which focuses on sustainable practices of the forest. This includes three areas; direct management of public entities, set aside for local communities and forest concessions. In addition to this, PPCDAM helped the creation of Brazilian Forest Service (SFB) (USDA 2006). SFB works with forest concessions contracts and planning and monitoring of federal public forest. They are also the leader of the national greenhouse gas (GHG) inventory where they work together with the state governments (MMA 2008b; McNeish et al. 2010).

Due to the accomplishments referred above, PPCDAM has contributed to a great reduction of deforestation in the Brazilian Amazon. To be specific, over 50 % reduction of deforestation happened during 3 years. PPCDAM is now in their second period, lasting from 2008 and 2011. The plan has 36 municipalities prioritized. Over 50 % of the deforestation occurs in these municipalities (MMA 2008b).

#### **2.4.2 The Sustainable Amazon Plan**

Plano Amazonas Sustentável (PAS) is a plan that was approved in 2008 to enhance sustainable development in the Legal Amazon. This includes making the economy more sustainable (Norad 2008). The plan is to manage this with the ability of the rain forest biome to recover itself and with investing in infrastructure and technology. The goal is to be able to do economic activities in accordance with sustainable use of the natural resources and preservation of biomass. These activities should at the same time reduce poverty and generate jobs (McNeish et al. 2010). PAS focuses on the states that are connected to the Amazon; that is Mato Grosso, Maranhão, Acre, Pará, Tocantins, Roraima, Amazonas and Rondônia. Some parts of Goiás and Distrito Federal are included in PAS even though they are not part of the

Amazon. They could be included because of the Cerrado (Norad 2008). It is important to involve different sectors both on national and regional level in order to achieve this plan (MMA 2008b).

### **2.4.3 National Policy on Climate Change**

Brazil is in a process of approving a national policy on climate change. However, there may not be a complete national policy on climate change until there is reached an international agreement as the Ministry of the Environment is unwilling to do so. The reason for this is that they want to have a uniform policy framework between REDD mechanisms and national policies. This policy is going to “identify plan and coordinate actions and measures to mitigate greenhouse gases generated in Brazil, as well as other activities required for adaptation to the impact of climate change” (McNeish et al. 2010:24). The main focus for deforestation policies in Brazil up till now is on the Amazon. However, deforestation in other biomes, like the Cerrado, has also received some attention. In 2009 Plano de Ação para Prevenção e Controle do Desmatamento e das Queimadas no Cerrado was introduced in order to find solution for reduction of deforestation in the Cerrado, and this is planned to be applied into the National Policy on Climate Change (McNeish et al. 2010).

### **2.4.4 Civil Society**

Brazil has an active and large civil society. A group of NGOs called Fórum Brasileiro de ONGs e Movimentos Sociais para o Meio Ambiente e o Desenvolvimento (FBOMS) is an example of this. The government in Brazil is working closely with the FBOMS, and members from FBOMS appear on meetings where environmental policies are being discussed. FBOMS are among other things working with climate change (McNeish et al. 2010).

## **2.5 The history behind the Amazon Fund**

There seems to be parallel and interlinked discussions within Brazil and in the international arena regarding reduction of deforestation during the time the idea of the Amazon Fund was



developed and created. Inside Brazil PPCDAM seems to be the starting point for the Amazon Fund. In 2006 the Brazilian government introduced the idea for developing countries to get compensated for reduced deforestation. They argued that a fund solution with voluntary donations international donors would be the best solution. This is due to a higher environmental gain since the emission reduction would be in addition to rather than substituting those for developed countries (PewCenter 2011). Up to 2007 the national institute for space research in Brazil (INPE) had developed more advanced forest monitoring system. Brazil had at this point a very thorough base to create a fund, based on PPCDAM, INPE and their idea of the compensation for reduced deforestation (Zadek et al. 2009).

Parallel to this, the Norwegian Government became increasingly interested in funding REDD initiatives. In 2007 they introduced ‘Norway’s International Climate and Forest Initiative’; where they intended to focus on supporting REDD initiatives (McNeish et al. 2010). This was introduced at COP 13 in Bali the same year, stating that Norway intended to give US\$ 3 billion to reduce deforestation (Niles et al. 2007). The increasing international interest in saving tropical forests gave Brazil a chance to “raise significant funding not simply to improve monitoring and enforcement of regulations to prevent illegal forestry, but to create alternative economic opportunities for development, where trees are worth more standing than felled” (McNeish et al. 2010:13). Azevedo (pers. mess 2010)<sup>2</sup>, one of the designers of the fund, states that during COP 13, Brazil presented the concept and structure of Amazon Fund. This COP then became the beginning of the cooperation between Norway and Brazil regarding the Amazon Fund (Azevedo pers. mess. 2010). Norway saw this as a chance to support a locally developed REDD initiative. They wanted to support the policies in Brazil for reduction of deforestation (Zadek et al. 2010). Thus, in 2008, BNDES and the Norwegian Government signed a contract for the Amazon Fund, as mentioned above. However, the fund was not complete in the sense of structure etc. in 2008. Several problems and issues were and are being dealing with at the Comitê Orientador do Fundo Amazônia (COFA) meetings since 2009.

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<sup>2</sup> Tasso Azevedo works in the Brazilian forest service (SFB) in the Ministry of Environment and is one of the designers of the Fund.

## **Chapter 3 Theory**

In this chapter I will look into and discuss the theory that is relevant for this thesis. First, it will look into the theory of governance and governance structures. This will be done since the main objective in this thesis is to look at Brazil's REDD+ governance system. Further this theory will be looked at in relation to REDD+, where REDD+ governance systems will be looked at. Lastly, Monitoring, reporting and Verification (MRV) systems in relation to REDD+ will be discussed.

### **3.1 Governance and governance structures, and institutional inertia**

Before both theories will be described and discussed, the concept of institutions will be defined. This concept is used both in the governance theory and the institutional inertia theory. The concept of institutions has several definitions. Veblen defines institutions as “settled habits of thoughts common to the generality of man” (Vatn 2005:10). Vatn (2005:60) on the other hand defines institutions as “conventions, norms and formally sanctioned rules of a society. They provide expectations, stability and meaning essential to human existence and coordination. Institutions regularize life, support values and produce and protect interests”.

#### **3.1.1 Governance and governance structure**

One can look at the theory of governance structure from different points of view. This thesis is looking at a governance system that will try to mitigate climate change. Thus, the literature will be drawn from environmental governance literature.

Environmental governance can be defined as “the set of regulatory processes, mechanisms and organizations through which political actors influence environmental actions and outcomes” (Lemos and Agrawal 2006:298). In addition to the public actors, governance also includes actors like communities, NGOs and businesses. This means that governance is different from government (Lemos and Agrawal 2006).

As there are several ways of looking at the theory of governance structure, there are also different ways of defining the concept. Najam et al. (2006:2) states that governance structure can be looked at “as the sum of organizations, policy instruments, financing mechanisms, rules, procedures and norms” that regulate the development of environmental issues dealt with in the specific governance system. The concept of organization can both be referred to as actors and institutions. Governance structure will be designed and maintained in a certain way depending on what types of actors are involved. According to Vatn and Vedeld (2010), the various actors can be distinguished in the terms of their capacities and competencies. At the same time, the actors involved and their input to the governance structure will affect the capacities of the whole governance structure. The type of coordination will also affect the capacities of the system. Governance structure will also be designed and maintained depending on how conflicts are handled within the system and how the coordination is between the actors involved (Vatn and Vedeld 2010). Governance structures will be constructed based on different institutions. Institutions will be further described in section 3.3.

Vatn and Vedeld (2010) and Haas et al. (2011) agree that environmental governance structure consists of at least three types of actors; private actors, public actors and the civil society. Haas et al. (2011) also add the scientific network to the list. As the scientific network will be looked at in the discussion of the Brazilian REDD+ governance structure, this thesis will also use the scientists as a type of actor. Civil society includes non-governmental organizations (NGOs) and locally formed community organizations (Vatn and Vedeld 2010).

The actors will coordinate on different levels, and this may include market interaction, command and reciprocal arrangements. Command is when the power lies with one of the actors. Reciprocal arrangement is when there is direct involvement between the actors, and norms of equality are central in the interaction. Market interaction is related to trade, where the distribution of power between the actors is thought of as formally equal (Vatn and Vedeld 2010). It has been argued that cooperation between two or more types of actors “that utilize institutionalized tensions amongst the parties” (Haas et al. 2011:5) are most effective. Biermann et al. (2009) can support Haas et al. (2011) in the sense that they state that it is more common these days with public-private relationships.

### *Capacities and competencies*

There are several capacities in the governance system that will vary depending on which type of actors that are involved and how they interact. Vatn and Vedeld (2010) describe four aspects in relation to this.

### *Rights and responsibilities*

Right and responsibilities refer to who have the economic power and also the rules and laws regarding political decision-making within the governance system. The latter also include who has access to the processes around the decision-making. In general, these types of capacities decide on the different interests that are relevant and important to protect (Vatn and Vedeld 2010).

### *Information*

In a governance system it is also important to see how the information is produced and distributed. This includes transparency and access. The relationship between the actors involved in the production and distribution of the information is also essential (ibid).

Asymmetric information may occur in a system where the power and the decision-making lie mainly with one of the actors involved in an interaction. This means that one of the parties have more information than other parties that are linked to the governance system (Vatn 2005). This may particularly be in relation to the distribution of information. Lack of transparency may also be a result if the power lies with one party.

### *Transaction costs*

Transaction cost is related to the costs of interactions. A broad definition of transactions costs may include “costs of information gathering, formulation of goals/agreements and contracts, and setting up and running systems for controlling the fulfillment of what is agreed” (Vatn and Vedeld 2010:4). The transaction costs in a governance system will vary depending on what type of governance system it is. The costs will depend on whether the system needs to

be built from scratch or if existing institutions and organizations can be used in the creation of the system already exist.

### *Motivation*

Motivation is determined by what type of logic that influences decisions. This will vary both with what type of actors that are involved and also what type of interactions that exist in the governance system. Private actors often have a different motivation than an actor from the civil society, which again may be different from the motivation of a public actor. Private actors often have profit maximization as their main motivation. Image making may also be part of the motivation. One may argue that most actors have some type of image making as part of their motivation. Regarding type of interactions, motivation will be dependent on whether there is a willingness to cooperate or more strategically interactions (Vatn and Vedeld 2010).

### *Evaluation criteria*

When evaluating a governance system, several criteria may be used. This thesis will focus on the evaluation criteria stated by Vatn and Vedeld (2010). These are chosen as they are relevant for the discussion of the thesis. The criteria are in both this thesis and the paper by Vatn and Vedeld (2010) looked at in relation to governance of reduction of emissions from deforestation and forest degradation.

**Table 1 Description of four criteria to evaluate governance systems**

Criteria	Description
Overall political legitimacy	Looks at different types of actors, how the different types of actors and the society are accepting the solution. It is important to distinguish between legal political legitimacy and a moral political legitimacy. Political legitimacy also emphasizes which actors should be involved at the different stages of the process, and transparency, accountability and distribution of power.
Effectiveness	Looks at to what degree reduction of deforestation is managed. Leakage control, additionality and permanence are important factors. Motivation aspects, like risk of corruption, and the ability of coordination across sectors are included in the factors in this criterion. The ability to coordinate at different levels of government in order to see to what degree the results will affect the different sectors.
Efficiency	Concerns whether and to what degree the system is managed to give results at low-costs. Both transaction costs and direct costs are included.

Source: based on Vatn and Vedeld (2010)

**3.1.2 Institutional inertia**

As both Veblen and Vatn state in their definition of institutions (stated earlier in this chapter), institutions are stable and important to humanity. According to Kingston and Caballero (2008), institutions should be stable and durable in order to create order, and this is important when institutions change is discussed. Veblen’s theory, discussed in Kingston and Caballero (2008), emphasizes that individual habits are created by institutions. This means that when behavior changes, institutions will change the habits. This again will make institutions to indirectly affect preferences (Kingston and Caballero 2008). Hodgson (2007:331) seems to agree with this by arguing that new habits are created as institutions” channel and constrain behavior”.

If one looks at an organization, habits exist there as well and can be called organizational routines (Kingston and Caballero 2008). Kingston and Caballero (2008) further argue that if the organization is going to change the routines, they may copy routines from others or find new routines in another way. However, this is a complex process as there are several people's interlocking habits that are going to be changed. Thus, this change will cause a slow process of change and may create inertia. North, as discussed in Kingston and Caballero (2008), argues that institutional inertia is created due to the informal constraints. This is because informal constraints happen evolutionary.

Kingston and Caballero (2008) argue that institutional inertia can also be linked to the history of the organization. The institutions that already exist have a historical aspect in it, and certain groups within the organization may be interested in keeping the institutions that already exist due to different reasons. These groups may try to prevent the institutional change from happening.

## **3.2 The governance system theory applied on REDD+**

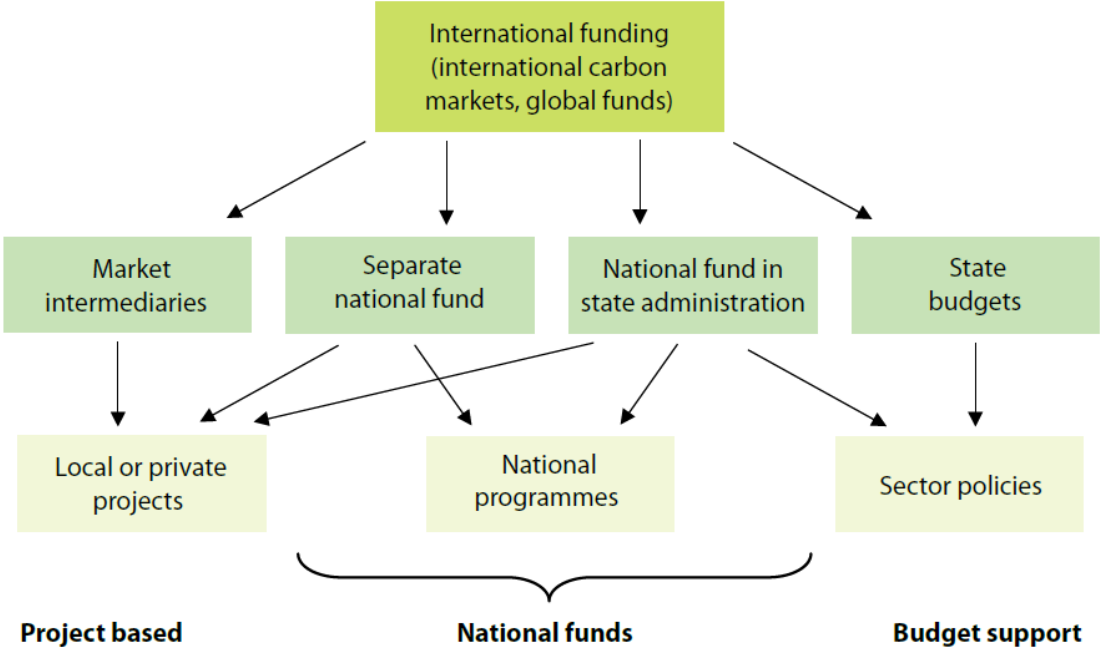
This thesis will look at the strengths and weaknesses of the Brazilian REDD+ governance structure. This section will therefore look at REDD+ from the perspective of governance theory.

### **3.2.1 The REDD+ governance systems**

When evaluating REDD+ governance systems, several criteria from the governance structure theory can be used in the evaluation process. In addition to the criteria described above, the REDD+ literature from Vatn and Angelsen (2009) and Vatn and Vedeld (2010) both include co-benefits as an additional criteria to evaluate a REDD+ governance system. Both papers are describing co-benefits to involve the effect on poverty alleviation and biodiversity preservation. The connection between REDD+ and the co-benefits are also essential. REDD+ is a mechanism to mitigate climate change by reducing emissions from deforestation and degradation. But at the same time, the livelihood of the people has an essential importance in

REDD+. For this reason, co-benefits were made as criteria. These four criteria are distinct from each other; however there will be some overlaps (Vatn and Vedeld 2010).

The REDD+ literature from Vatn and Angelsen (2009) and Vatn and Vedeld (2010) refer to four alternative governance systems. They are ideal types of systems. In reality however, there are likely to be mixtures of the at least two of the systems. The governance systems are called market directed (financial) intermediaries, separate national fund, fund within state administration and state budget. Figure 2 show how the different structures are connected to the local level. The diagram also shows the connection to international funding. The last point will however not be an essential issue in this thesis.



**Figure 2 Four different REDD+ governance structures. Source: Vatn and Angelsen (2009)**

Below there will be an explanation of the different systems. It is important with a good system when a country will be dealing with governance of forest resources and distribution of benefits. As also mentioned other places in the thesis, it is important that the governance system takes the situations in the country, gaps and needs into consideration when building a REDD+ governance system. The rules of allocation of forest and carbon rights are important to be clear and consistent. If this is not fulfilled, the distribution of benefits may be skewed. Enforcement is also important as this will prevent free riders (UN-REDD 2010). The Brazilian REDD+ governance system as it is today is a fund. Thus, a discussion on strengths



and weaknesses of the systems of separate national fund and national fund within state administration will be touched upon. The discussion of the data analysis will compare the strengths and weaknesses of the Brazilian system with these two ideal types.

### *Market directed intermediaries*

This type of REDD+ governance system is an interaction between agents (often firms) and local projects where the firms receive emission reduction credits by funding the projects. The agents are often international donors. Clean development mechanisms (CDM), as an already existing system, is an example of the market directed intermediaries (Vatn and Angelsen 2009).

### *Separate national fund*

The second REDD+ governance system is called separate national fund. This is a fund created with an administration outside of the state administration. This type of fund is typically governed by a board of representatives from different types of stakeholders, sometimes also including international stakeholders. Stakeholders are likely to be several types of actors. This could be civil society, business, donors and government officials. It could manage several types of both projects and national programs. Managing a conservation unit or a national payment for environmental services (PES) program are examples of what a separate national fund could work with (Vatn and Angelsen 2009).

Conservation Trust Fund (CTF) can be used as an example to show what characterize a fund outside of administration. CTFs are likely to receive strong political legitimacy. Some argue that by achieving best success, there should not be a majority of government officials represented, neither should the CTF be “chaired by a government official” (Spergel and Taïeb 2008:27). By not having a governmental majority, the decisions will be based on the mission and purpose of the fund rather than on government political criteria. Spergel and Taïeb (2008) also argue that governmental representatives are more likely to be replaced by other representatives within the same agency more frequently than representatives from non-governmental agencies. Thus, CTFs without governmental majority may give more stability of representatives. Another argument stated by Spergel and Well (2009), says that a government-independent board allow the fund to be more transparent and also to be freer in

controlling how the donations to governmental agencies are being used. Another advantage with CTF is that the projects supported are likely to be supported on a mid- to long-term basis. Thus, permanence has a higher chance of becoming a priority (Spergel and Well 2009). In countries with a weak state/federal government administration, a fund outside the state administration might be a good solution. A fund within in a weak government could include corrupt governments and corruption on a local level (Vatn and Angelsen 2009).

A potential disadvantage of CTFs is that up till now there has not be too much focus on measuring results on biodiversity from the implementations done by the funds. They often lack baseline data and thus make it difficult to measure and monitor the change in biodiversity. Reasons for this may be that biological indicators are difficult and at times expensive to evaluate (Spergel and Täieb 2008).

#### *National fund within state administration*

This type of fund is administrated by a state organization, either by a ministry or an agency under the ministry. The funds are governed by a separate board where members from relevant state and public administrated are included. Civil society may also be a part of the board. Funding can go to local/private projects, national programs and sector policies (Vatn and Angelsen 2009). According to Vatn and Vedeld (2010), the fund can also have more autonomy like in a public agency, foundation/trust or government owned corporation .This type of fund would have a board decided by the government. Vatn and Vedeld (2010) also argue that the government would secure its finances. However, they would not take part in the decision-making regarding the use of money, only the statutes of the fund (ibid).

Forest funds will be used as an example of a national fund to briefly discuss advantages and disadvantages with a national fund within administration system. Transaction costs are likely to be smaller in this system as it will use already existing structures and institutions when establishing and maintaining the fund (Vatn and Vedeld 2010). In addition to this, accountability and transparency have a potential to improve as the fund may be set as isolated fund within the state administration where independent audits should be focused on. An isolated fund which is legally earmarked may increase the chances that the money goes to the supposed purpose (Rosenbaum and Lindsay 2001).

On the other hand, this option may not always be the best. This may in particular be with countries that have a weak government. Experiences from the Indonesian Reforestation Fund show that weak governments may meet challenges regarding the extra flow of money from REDD+. This can affect the sustainability of a REDD+ fund (Barr et al. 2010). Vatn and Angelsen (2009) argue that also corruption is of higher risk with a weak government. Conflicts might also appear between the fund and the sector administration. This could be between the fund and sector administrations related to forestry, agriculture and development for instance as these sectors may be interested in developing the forest (ibid).

### *Conditional state budget*

This solution can be divided into two; general budget support and sector budget support. General budget support is where both donor and receiver agree where to priority the donations whereas in sector budget support the donations go to a specific sector. These two solutions are divided, but they are not distinctly separated (Vatn and Vedeld 2010).

These four systems are not always separate. In reality, countries may have a mix of the systems (Vatn and Angelsen 2009).

### **3.2.2 Challenges of REDD+ governance systems**

The REDD+ governance systems are dealing with some specific challenges in order to achieve reduced deforestation and need therefore to have a specific structure in order to deal with these challenges. It should be able to manage comprehensive actions. To achieve long-term results, co-benefits should also be included. However, there are discussions on how much focus there should be on co-benefits. The governance structure will influence how trade-offs will be treated and therefore also the outcomes. This will especially be in the context of the amount of CO<sub>2</sub> that is being reduced versus other goals, like co-benefits (Vatn and Angelsen 2009). Issues concerning co-benefits will also most likely cause some challenges for the REDD+ governance systems. Biodiversity is often high in tropical forests. By protecting the forest, the biodiversity have a good chance of being protected at the same time. But it does not mean that REDD+ decisions will protect the biodiversity. Often there is not a high level of biodiversity where there is cheapest to reduce emissions. Thus, efficiency

and protection of biodiversity may come in conflict with each other and thus may raise challenges for the chosen governance structure (Vatn and Vedeld 2010).

The issue of poverty alleviation, as a co-benefit, is also likely to come in conflict with REDD+. REDD+ will affect the users of the forest, including poor landless farmers. Regulations for expansion of agriculture may be changed, and may therefore affect the feeding of a growing population. Landless farmers are likely not to be compensated for the REDD+ changes. Poverty alleviation may also come in conflict with efficiency. Earlier experience with carbon payments shows that it favors large landowners as “lower transaction costs per ton of carbon sequestered as each deal is larger” (Vatn and Vedeld 2010:6).

The importance of the forests for different kinds of actors may be yet another challenge. Tropical forests have an effect on the economy both on national and global markets. Agriculture is a significant driver of deforestation. There are also many local usages of the forest. One could argue that the REDD+ mechanism is to change people’s mindset for usage of the forest in a way that are acceptable. This may affect the governance structure in two ways. Leakage may be a problem as the deforestation may just be moved from one place to another. The other issue is the drivers. Due to economic causes, among other things, the drivers of deforestation may be more complex than only occurring at a local level (Vatn and Vedeld 2010).

Corruption seems to be a concern that is repeated, and may therefore become a big challenge to the governance systems. According to Vatn and Vedeld (2010), due to the large amount of money in REDD+ both nationally and globally, REDD+ “may attract people with other motivations than reducing carbon emissions and securing co-benefits” (Vatn and Vedeld 2010:6). Many of the actors already involved in the deforestation arena are already famous of being corrupt. The REDD+ donations may therefore increase temptations to some actors (Vatn and Vedeld 2010).

### **3.2.3 MRV systems**

MRV systems are, in the REDD+ context, systems that control the change in forest carbon stocks. This includes forest area changes and carbon stock change estimation or emission factors. All forest carbon change should be registered because all types of changes will have

an effect on the climate (Herold and Skutsch 2009). A reliable system is important because it gives credibility to the specific initiative and may attract more donors. However, at this point, very few developing countries<sup>3</sup> have a good MRV system. According to Herold and Skutsch (2009) very few of these countries have a reliable system to control forest cover and greenhouse gas emissions<sup>4</sup>. Why so many of the countries lack a good monitoring and control system may be due to several factors. One is lack of experience in these issues. Another factor may be that the country lack the technology needed to have a reliable system. A third factor may be that the country lacks the capability to have a continuous system at a national level. MRV includes both actions on the ground, which is important in the readiness phase, and REDD+ transactions. This includes compensation and financial transactions or transfer. REDD+ transactions is important when a country is ready for implementation (ibid).

### *Building a MRV system*

When building a REDD+ mechanism, a plan to put a MRV system in place becomes important. The various countries involved will tackle the building/improvement of their MRV system differently. However, it is essential that the system match with the Intergovernmental Panel on Climate Change IPCC Good Practice Guidance (IPCC-GPG) for reporting carbon emissions and removals at an international level (Herold and Skutsch 2009). IPCC-GPG is part of the revised version of IPCC Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines) from 1996. The IPCC guidelines are used for estimation of GHG emissions and removals (Penman et al. 2003). In addition to this it is important to compare the already existing monitoring system in the country to the REDD+ MRV system. There may be less of a challenge to introduce a MRV system in a country if they have good data and capacity (Herold and Skutsch 2009).

To be able to build a MRV system it is important with coordination. There should be a good coordination between forest carbon MRV and national REDD+ policies, as mentioned above. In addition this, there must be protocols and technical units to handle the data on forest carbon. This lies under measurement and monitoring. A third issue that must be covered is reporting. Reporting includes putting all the relevant data in a database. This database will be

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<sup>3</sup> Herold and Skutsch (2009) refer to non-Annex 1 countries, which are mostly developing countries. These countries are in one way or another extra vulnerable to climate change (UNFCCC 2011a). A complete list of the countries can be found here: [http://unfccc.int/parties\\_and\\_observers/parties/non\\_annex\\_1/items/2833.php](http://unfccc.int/parties_and_observers/parties/non_annex_1/items/2833.php).

<sup>4</sup> According to Herold and Skutsch (2009) only 3 of the 99 Non-Annex 1 countries have a reliable system to control forest cover and greenhouse gas emissions.

used in national estimates and international reporting. The last issue concerns verification. This is related to the REDD+ effectiveness criteria, and how a framework is needed to verify the long-term actions and actors in relation to the criteria (Herold and Skutsch 2009).

Even before a country has managed to build a complete MRV, it is important to find out what they can do. This can be linked to the concept of conservativeness and an interim system. This means that “when completeness or accuracy of estimates cannot be achieved, the reduction in emissions or increases in carbon stocks should not be overestimated and the risk of overestimations should be minimized” (Herold and Skutsch 2009:96). Conservative estimates can be replaced by “best estimates” when a MRV system has been established and improved (Herold and Skutsch 2009).

## **Chapter 4 Methodology**

This chapter will describe the methodology used in the thesis. It will also reflect on the experience from the fieldwork in relation to the methodology used.

### **4.1 The methodology of grounded theory**

In this thesis the methodology of grounded theory will be used. This implies that process of writing starts with a theory. From this theory data collection will occur. During this process, one will then go back to theory and then to data again in order to see if the theory will match or not (Bryman 2008). According to Bryman (2008) this type of framework is broadly used within qualitative research in social sciences.

Grounded theory will be used in this thesis as I will go back and forth between the theory of governance structure in a REDD+ context and the case of Brazil's REDD+ governance structure. Thus, this study will be used to find out in the strengths and weaknesses with Brazil's REDD+ governance system in relation to the theory.

### **4.2 Research Design**

The thesis is a mixture of different types of research. It consists of descriptive, explanatory and normative research. It is a descriptive study as the thesis will look at what the Brazilian REDD+ governance structure is. It will at the same time look a little on why the governance structure became what it is today. The latter point is related to explanatory research (De Vaus 2001). It is also a normative research as I do an evaluation of the Fund and also come with some suggestions on how the governance system can be improved in the future (Routio 2007).

The thesis will follow a case study design in order to study Brazil's REDD+ governance. By using a case study design the researcher does a detailed and intensive analysis of a case. Its main goal is often to find and explain the special characteristics of the case that is being studied (ibid). In the case of Brazil's REDD+ governance system, studying its characteristics is indeed one of the thesis' main goals. These characteristics of the fund will help to see the strengths and weaknesses of the fund as a REDD+ governance structure.

This design is mostly seen in qualitative research, but can also be found in quantitative research. Generalization is often not the main point with a case study. As Bryman (2008:57) argues, “the crucial question is not whether the findings can be generalized to a wider universe but how well the research generates theory out of the findings”. However, as a case study design does not need to be an inductive study, a case study can both be used as theory generation and theory testing (Bryman 2008).

### **4.3 Data collection method**

To collect the data qualitative research methods were used. This included both an analysis of written materials and in-depth interviews in the form of semi-structured interviews. The written material covered governmental documents, mostly from the Environmental Ministry in Brazil and Norwegian governmental documents. Official documents from BNDES and from the fund itself is also being used. The sources were both in English and in Portuguese. I have used several Portuguese sources, both the online homepage of the Amazon Fund and governmental documents. The homepage of the Amazon Fund are partly translated into English. However, more information exists in Portuguese, thus I have used mainly the Portuguese version of the homepage.

Semi-structured interviews were chosen as the type of qualitative interviews because the interviews were allowed to be flexible and the interviewee could elaborate on the things he thought was important. But at the same time, an interview guide with some more or less specific questions was followed in order not to lose direction of the interview (Bryman 2008). I used in-depth interviews to find data that are not already in written documents. In addition to that, this type of interviews was used to clarify any doubts coming up in the readings.

In addition to this, I used some participant observation. According to Bryman (2008), participant observation is when the researcher is part of a group over an extended period. Participant observers study and observe conversations within the group of people. I would argue I partly used participant observation. I had an office at the socio-environmental institute (ISA) in Brasília. Adriana Ramos, one of my informants and a member of the steering committee (COFA) in the Amazon Fund, works in ISA. I have therefore been able to be an observant at two COFA meetings and one conference about the Fund. The conference was



held at 20<sup>th</sup> of October, 2010. I will use some of the issues I observed there to support the other materials in this thesis.

### **4.3.1 Sampling**

To choose the interviewees, I used a common technique in the qualitative research called purposive sampling. This technique was used to collect interviewees that had knowledge about the structure of Brazil's governance structure (ibid). People that were interviewed were people working with the Amazon Fund inside BNDES, people that have relations to the fund within the Ministry of the Environment, the designer of the fund, people sitting in COFA and CTFA, and researchers and other people working with the Amazon Fund and REDD+ in Brazil. Several projects that have been approved by the fund were also interviewed.

As I chose the interviewees out from their knowledge, this is not a type of probability sampling. Thus, there will be difficult to generalize the results. However, generalization is not one of the main goals of the thesis. The sample size of interviews was depended on the written sources that were found. As mentioned above, the interviews were used as additional knowledge of what could not be found in the written sources or in relation to any confusion in the written sources. In total 14 interviews were done. Doing the interviews gave a deeper insight into Brazil's REDD+ governance system than just the written sources. Some of the issues discussed in these interviews are not found in any accessible written sources. Other issues that were discussed were issues that exist as written materials. These issues however, were different in different sources. I used the interviews to try to find out what was more correct.

### **4.4 Data Analysis**

The analysis of the data was based on grounded theory. Bryman (2008) divides the grounded theory into two parts; tools and outcomes. Tools consist of theoretical sampling which deals with coding of data. This means that the data is split up into component parts and receive names. Tools also consist of theoretical saturation. This is "the process that relates to two phases in grounded theory: the coding of data (implying that you reach a point where there is

no further point in reviewing your data to see how well they fit with your concepts or categories) and the collection of data (implying that, once a concept or category has been developed, you may wish to continue collecting data to determine its nature and operation but then reach a point where new data are no longer illuminating the concept)” (Bryman 2008:542). A part of the theoretical saturation is the constant comparison. This can be argued to be an important part of the analysis where there is a close relation between data and conceptualization. Outcomes refer to outcomes that occur from the different stages of the analysis. This includes concepts, categories, properties, hypothesis and theory (Bryman 2008).

Using grounded theory to analyze the data, a continuing collection and analysis of the data at the same time was a natural process. After the first data were collected, I did an analysis of this and the outcome of the first interviews determined the next step of my data collection process. As I was interviewing people from different parts within and related to the fund, each interviewee gave a unique answer. However, this helped me to understand more complete picture of the fund and this was part of the process of finding new questions for the next interviewee. Most of the interviews were done in order to get key information from the informant. In the interviews done with the four different projects supported by the Fund, I indirectly have used coding of the data as many of the same types of questions were asked to all the projects. This was because I wanted to get the same type of information from the different projects.

#### **4.5 Trustworthiness and authenticity qualitative research criteria**

As reliability and validity fit as criteria in quantitative research, the thesis will use alternative criteria to measure the qualitative research in this thesis. The two main criteria are called trustworthiness and authenticity (Bryman 2008).

Trustworthiness is divided into four under-criteria. The first under-criterion is credibility. This is almost the same as internal validity in quantitative research (whether the theoretical ideas developed and data matches or not). It looks at to what degree the study is following a good practice and that to what degree the results are opened for others in the social world so that they can control if the researcher has understood the social world (Bryman 2008).

Transferability is almost the same as external validity (generalization), but it matches more to qualitative research. This criterion looks at whether the research has deep and broad description of the details of a culture that can be used to be transferable to other settings (Bryman 2008).

Dependability, the third under-criterion, is the qualitative research's answer to reliability in quantitative research. It concerns with all the records, including problem formulation, selection of research participants, fieldwork notes, interview transcript, and data analysis decisions, to be easily accessed by others (Bryman 2008).

Confirmability, the qualitative research's answer to objectivity in quantitative research, makes sure that the personal values do not intervene with the research (ibid). The research should not be reflected by the researcher's bias, motivation or interests (Robert Wood Johnson Foundation 2011).

The second main criterion is called authenticity which is concerned with fairness, ontological authenticity, educative authenticity and catalytic authenticity. Ontological authenticity looks at whether the study will give others an understanding of the issue. Catalytic authenticity looks at whether the study stimulates others related to the study to be engaged in the issue (Bryman 2008).

The data collected and analyzed was well documented. Generalization is not a main goal in this thesis, however the thesis will give a good description of the fund so that other funds may find similarities and differences in relation to a REDD+ governance system. In addition, different opinions were looked at and I have tried to do this study in a most objective manner as possible. I put myself out of the situation, and used the data as it was stated. Nevertheless, I was critical to the issues discussed in the interviews, trying to make a distinction between facts and personal opinions of the interviewee. The written sources will also be looked at critically. Some internet sources are also used in this thesis, in addition to the homepage of the Amazon Fund which is used in the analysis chapter, and these sources are looked at with particular criticism.

## **4.6 Research ethics**

In a research, be a quantitative or qualitative, ethical issues may come up during the data collection process, and potentially also afterwards. Issues like confidentiality of the interviewees or deception by the researchers are examples of this. As the interviewees in this thesis were not any marginalized groups or similar, but highly educated researchers or people working within the government or sitting in the fund, there are some ethical issues that may be less relevant. However, ethical issues may still arise. This can for example be issues of confidentiality, showing identity or not, or how to deal with information “off the record” that could be important to the thesis. Information that the interviewees asked not to be recorded were not recorded (Bryman 2008). The information from the interviews will only be used by me. This was also asked by some of the interviewees. Except from these issues, the fieldwork did not lead to any difficult ethical problems.

## Chapter 5 Analysis

In this chapter I will analyze the four research questions as defined in section 1.4 in order to be able to inform the discussion of the main research objective in the discussion chapter.

### 5.1 What are the main characteristics of the governance system of REDD+ in Brazil?

This section will look at the first research question.

#### 5.1.1 Why did the Brazilian government choose the fund solution as it is today?

The structure of the Amazon Fund was developing as the Fund came about. Azevedo and the other people from Serviço Florestal Brasileiro (SFB) that was designing the fund met some issues that had to be dealt with in the process of establishing the fund. Earlier experiences of private philanthropic funds, independent conservation trust funds and Pilot Program for the Protection of the Tropical Forests of Brazil (PPG7) were helping to solve these designing issues. This led the designers to choose the fund solution as it is today (Zadek et al. 2009; Zadek et al. 2010).

#### *Market-based versus fund-based approach*

Firstly, the Brazilian government needed to decide what kind of funding mechanism that should be created. Brazil was in 2005 fairly clear on an overall structure of a design for a REDD financing system. According to McNeish et al. (2010), they wanted a national approach. At the same time, they were not interested in a market-based approach (McNeish et al. 2010). The reason for this is that the Brazilian government at this point did not want to be involved in an international emission market regarding reduction of deforestation. This was because the federal government wanted to have sovereignty over the Amazon. Thus, they did not want the international society to have any control over the resources in the forest, as it was likely to be if Brazil chose a market-based approach (Zadek et al. 2009). Therefore, a fund-

based approach was chosen. Zadek et al. (2009) argue that the Brazilian government was interested in a voluntary fund. They also state that the designing of the Amazon Fund needed to fit the national position on REDD.

### *The decision on the type of fund*

The idea of a project-based funding was dropped. Even though projects are the main receivers of the funding, the current system is not project-based in the sense that the funding is channeled through the system via a fund, the Amazon Fund. According to Zadek et al. (2009), project-based funding was argued to have high administration costs. The system was also argued to have too low capacity in the sense of financial support to the plans to control deforestation and sustainable development in the Amazon. Zadek et al. (2009) argue that leakage and problems with fragmentation also were issues that could be more difficult to control in a system like this.

Zadek et al. (2009) argue that a fund administered by the government was not a wish as the bureaucratic processes often are long-lasting in the Brazilian system. In theory, a fund administrated by the government would work with a scaled and strategic approach. In practice however, Zadek et al. (2009) argue that the process of taking decisions in the fund would take longer time and the fund would not be as flexible in the decision-making. The government's ability to avoid corruption and to take the necessary steps to protect forest people and the poor were also discussed. Nevertheless, they were interested in a national fund (Zadek et al. 2009).

A private fund was important as the government should not have any control of the funding. But at the same time, there should be a public band that administers the fund. A public bank would allow the funding to be available to all kinds of organizations in the society (Azevedo pers. mess. 2010).

It was early decided that the fund should be performance-based; which means that Brazil have to reduce emissions from deforestation and degradation, and then get compensated by this. The decision to have performance-based funding also contributed to the designing of the fund (Azevedo pers. mess. 2010; Santilli pers. mess. 2010<sup>5</sup>).

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<sup>5</sup> Márcio Santilli have been working with REDD+ in Brazil and works in ISA

### **5.1.2 What kind of governance system is the Brazilian governance system of REDD+?**

#### *The structure of the Brazilian REDD+ governance system*

Today the Brazilian REDD+ governance system consists of 3 actors. They are the Amazon Fund, the federal government and the project leaders of the supported projects by the fund. The Fund is autonomous from the federal government (Zadek et al. 2009). Thus, the government cannot control the use of the money. The government is however, represented in Comitê Orientador do Fundo Amazônia (COFA) and can through COFA take part of the decisions of the guidelines and criteria of the fund (Azevedo pers. mess. 2010). The federal government also takes part of the Brazilian REDD+ governance system in that the Fund uses federal plans and the federal plans' strategies as the basis for their strategies. Nordang (pers. mess. 2010)<sup>6</sup>, from the Norwegian Embassy in Brasília, argues that the Amazon Fund is an independent organization from the national politics and no money go into the fund from the government.

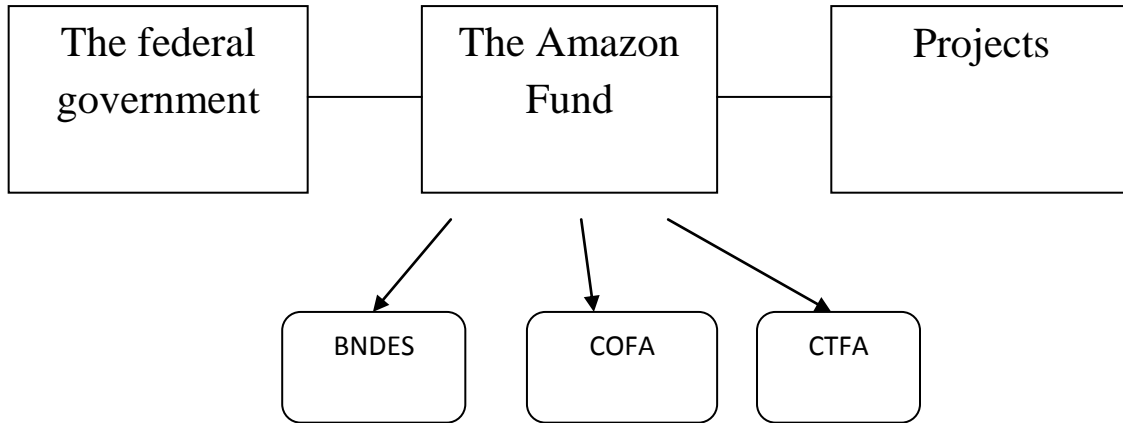
Even though the Fund is on paper autonomous from the government, it can be discussed to what degree they are fully autonomous.

#### *The structure of the Amazon Fund*

There are three types of actors that are involved in the Amazon Fund. That is COFA, BNDES and Comitê técnico do Fundo Amazônia (CTFA). Figure 3 show an organizational map of the Brazilian REDD+ governance system.

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<sup>6</sup> Inge Nordang works with the Amazon Fund in the Norwegian Embassy in Brazil



**Figure 3 Organizational map of the Brazilian REDD+ governance system**

The Amazon Fund is a private fund. It is managed by BNDES, a public joint-stock company. BNDES has a private law. This means that it has shares in other private companies and the government does not own these companies (Nordang pers. mess. 2010; Azevedo pers. mess. 2010). It was early decided that the fund should be performance-based; which means that Brazil has to reduce emissions from deforestation, and then get compensated by this reduction (Azevedo pers. mess. 2010; Santilli pers. mess. 2010). By choosing performance-based funding, the focus of the donors moves away from “the assessment and management of activities and simply onto the quantity of avoided emissions achieved” (Zadek et al. 2009: 15).

Before BNDES was chosen as the manager of the Fund, the designers looked at different organizations, mainly banks in order to find the best actor to manage it. According to Ramos (pers. mess. 2010)<sup>7</sup>, member of COFA, the alternatives were BNDES, World Bank, Banco do Brasil, United Nation Development Program and Global Environment Facility (GEF). Zadek et al. (2009) argue that with a multinational development bank, the fund would not tackle the drivers of deforestation in an effective way as they would not be familiar with local issues in the same way as a national bank. It would also be costly. This decision was also based on earlier experiences from multinational donor cooperation (Zadek et al. 2009). Thus, a national bank was the priority. The choice was then narrowed down to Banco do Brasil, which is a national bank, and BNDES. They finally decided on BNDES. It was chosen for several

<sup>7</sup> Adriana Ramos is a member of COFA, represented by the Brazilian Forum on social and environmental NGO movements (FBOMS). She works in Instituto Socioambiental (ISA). A complete list of informants is added to the References. Every informant will also be represented in a footnote the first time they are being mentioned.



reasons. The Brazilian government was interested in a solid institution that had good reputation for dealing with corruption (Ramos pers. mess. 2010; Lourenço pers. mess. 2010). According to Lourenço (pers. mess. 2010)<sup>8</sup>, a member of COFA, BNDES as a development bank a big development bank in the world today, in terms of the money flow. BNDES has been operating since 1952 and have a good reputation within Brazil and has its own routines. BNDES have many years with both national and international experience. Because of this, they were seen to have the structure, capabilities and expertise needed to deal with local and foreign currencies using market instruments by the Norwegian agency for development cooperation (Norad) (Norad 2008). Norad (2008) did an analysis of the Fund as Norway was about to sign a contract with BNDES. Zadek et al. (2009) argue that they are also expected to take decisions in a “timely and professional manner” (p. 15). Norad (2008) is arguing that BNDES is a “well-respected and trusted partner in Brazil” (Norad 2008:16).

### *The REDD+ phases*

The literature, both from the written and oral sources, seems to disagree in which of the three phases of REDD+ mechanism the Amazon Fund should be placed; whether it is more a readiness fund or a fund in a later phase.

If one looks at the REDD+ literature from Wertz-Kanounnikoff and Angelsen (2009), it is possible to argue that the fund may be placed in the third phase. The first phase focuses on building a full developed monitoring, reporting and verification (MRV) system and introducing demonstration activities. As later discussed in this analysis, Brazil already has a highly developed MRV system. It can be argued that the Fund indeed is a demonstration activity. UNFCCC (2011b) describes demonstration activities as “essential in order to establish a basic stock of practical experiences related to REDD”. As the Fund is the first practical experience related to REDD in Brazil, one may argue that it is a demonstration activity. However, other factors contribute to the argumentation that the Fund can be placed in the third phase. One of the main arguments for placing the Fund in the third phase is that the third phase is described as where “tropical forest countries are compensated solely for reduced emissions and enhanced carbon stocks relative to agreed reference levels” (Wertz-Kanounnikoff and Angelsen 2009:15). The Amazon Fund receives donations only for reduced emissions relative to an agreed reference level.

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<sup>8</sup> Alberto Lourenco is a member of COFA, represented by SAE in the Ministry of Environment

At the same time, the Brazilian government is currently developing a national REDD+ system. And according to Zadek et al. (2010) the Fund should not be seen as a national REDD scheme. They argue that the Fund should be seen as a first incarnation of a national scheme. As this thesis argues that the Fund can be placed in a third phase REDD mechanism, the Amazon Fund can be looked at in relation to the national governance system of REDD+ in Brazil. Thus, I will only look at the status of national REDD+ activities as it is confirmed in early stages of year 2011.

As will be shown later in the analysis, the MRV system of the Fund only detects reduction of deforestation, not degradation. This shows that the Fund on the one hand is a RED+ governance system. On the other hand, the Fund supports projects that work with reduction of degradation. This means that donations is received based on RED+, however, projects supported by the Fund are also working with degradation issues.

### **5.1.3 How are the competencies, capabilities and authority distributed between the various sections involved?**

This section will look at the three actors of the Amazon Fund in connection to their responsibilities, competencies, and authorities are shared between the actors.

#### *Competencies and capabilities*

The three actors each have clearly defined capabilities and competencies. This section will start with COFA's responsibilities and competencies and continue with the responsibilities and competencies of BNDES and CTFA.

#### *COFA - The guidance/steering committee*

COFA is the guidance committee of the fund and have supervisory functions to BNDES, which is the administrator of the fund (Norad 2008). COFA must "adjust the Fund Support Lines to the guidelines of the Sustainable Amazon Plan – PAS and the Action Plan for the Prevention and Control of Deforestation in the Legal Amazon – PPCDAM" (MMA

2008b:16). This means that they make the guidelines and criteria for guiding the use of donations. They also are to approve The Amazon annual report (Azevedo pers. mess. 2010).

The members of COFA are appointed by BNDES and they come from three different groups of actors; federal government, state governments and civil society. Table 2 shows the different actors within COFA.

**Table 2 Overview of the members of COFA**

Federal Government	State Governments	Civil Society
Ministry of Environment	State of Acre	Brazilian Forum of NGOs and Social Movements for the Environment and Development
Ministry of Development, Industry and Foreign Trade	State of Amapá	Coordination of the Brazilian Amazon Indigenous Organizations
Ministry of Foreign Affairs	State of Amazonas	Industry National Confederation
Ministry of Agriculture, Farming and Supply	State of Maranhão	National Forum of Forest Activities
Ministry of Agrarian Development	State of Pará	National Confederation of Workers in Agriculture
Ministry of Science and Technology	State of Mato Grosso	Brazilian Society for Science Progress
Presidential Staff Office	State of Rondônia	
Strategic Affairs Secretariat of the President's Office	State of Roraima	
BNDES	State of Tocantins	

Source: based on MMA (2008b)

Each of the different actors within COFA has one representative and one deputy. All the three groups have to agree on the decisions taken and each has one vote. The president of the committee should be represented by the federal government. The president must be chosen

from the Ministry of the Environment in the two first years of operation (MMA 2008; McNeish et al. 2010). At this moment Izabella Teixeira, the Minister of the Environment, is the president of COFA.

### ***BNDES - The Brazilian development bank***

BNDES is the administrator of the Fund. They have the “overall responsibility for the operation, reporting and monitoring of the Fund” (Donation Agreement 2008:3). The fund raising will be managed on the basis of the data from INPE and SFB approved by CTFA. The bank is also to make sure the donations will be used according to the guidelines and criteria. They are also in control of approving and monitoring the projects that are supported by the Fund. Another responsibility is evaluation of the projects after it is finished. They are also responsible for updating the website regarding beneficiaries, disbursements, projects and reports (Donation agreement 2008). BNDES is the connection between the fund and the donor. BNDES must inform donors if something goes wrong with the implementation of the Fund. The donors transfer the donations directly to BNDES (Donation Agreement 2008). A diploma made by BNDES is given to the donor stating how much the donor contributed to reduce CO2 emissions by deforestation (MMA 2008).

The Fund is based on donations, and, according to Accioly (pers. mess. 2010)<sup>9</sup> who works in BNDES, the Fund works in another way than BNDES is used to. Usually, the bank works with loan activities. Several informants have argued that BNDES have not changed their routines when they work with the Fund. May (2011)<sup>10</sup> argues that BNDES use the same procedure for contract framework and letter of intent. He also argues that they use the same hierarchy of decision-making on which activities they should approve. This will affect the capability of BNDES, and as I will return to later in this thesis, the issue of not supporting small projects can be due to this.

### ***CTFA - The technical committee***

CTFA was created to confirm the calculations of the reduction of emissions from deforestation in the Brazilian Amazon. This committee consists of six specialists within the

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<sup>9</sup> Guilherme Accioly is the acting leader of the Amazon Fund department in BNDES

<sup>10</sup> Peter May wrote a description of the Amazon Fund in Angelsen, A. (ed) Realizing REDD+. National strategy and policy options.

scientific and technological area, and they are appointed by the Ministry of the Environment. CTFA receives data on deforestation rates once a year. These data are calculated by the national institute of space research (INPE). CTFA controls and validates the methods used for the calculations. In addition to this, “they receive annually data from Serviço Florestal Brasileiro (SFB) telling the value of carbon biomass per ton per hectare. CTFA validate this data so that the fund will be able to represent carbon biomass value that is a reliable minimum average” (MMA 2008:9). After the confirmation from CTFA, the emission reduction data will be the reference for the fund’s availability of resources (MMA 2008). CTFA are not 100 % satisfied with their responsibilities however. According to Nobre (pers. mess. 2011)<sup>11</sup>, a member of CTFA, they want a higher level of influence. According to Conde (pers. mess 2010)<sup>12</sup>, who works in the Brazilian forest service, CTFA seems to be interested in being more involved with the process of approval of projects. They want to give advices on which priorities that should be focused on when approving the projects. This includes decisions on geographical priorities.

### *Authority*

McNeish et al. (2010:27) argue that “the governance of the Fund is under the charge of the Guidance Committee of the Amazon Fund (COFA)”. This means that COFA is the actor that leads the Amazon Fund in a specific direction due to their guidelines and criteria. However, COFA do not have any authority. They are purely a guidance committee (Conde pers. mess. 2010; Lourenço pers. mess. 2010; Azevedo pers. mess. 2010; Ramos pers. mess. 2010; Guilherme pers. mess. 2010).

BNDES is the actor with all authority regarding any decision-making in the Fund (ibid). Ramos (pers. mess. 2010) argues that COFA do not have any power to sanction BNDES if BNDES do not follow the criteria. Ramos (2010 pers. mes.) and Lourenço (2010 pers. mes.) argue that up to now, BNDES has been so little transparent about the application process that they do not know whether BNDES is following up on criteria or not. But at the same time, they state that they have not seen any projects that do not match with the criteria. Even though COFA do not have any authorities, problems and discussions between COFA and BNDES are being discussed at COFA meetings. Ehringhaus (pers. mess. 2010)<sup>13</sup>, works with BNDES,

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<sup>11</sup> Carlos Nobre is a member of CTFA and is represented by INPE

<sup>12</sup> Marco Conde works in SFB and was also one of the people worked with the initial planning of the Fund

<sup>13</sup> Christiane Ehringhaus works in GTZ which cooperate with BNDES on technical issues

argues that the Fund is debate-oriented. Ramos (pers. mess. 2010) agrees with this by stating that the Fund has objective debates about the problems in a COFA meeting where solutions are being suggested. BNDES will then look at what has been discussed and see how it can be solved. This can be shown by an example of COFA's annual report from 2009. One of BNDES's roles is to write the annual COFA report. Their first draft of the report of 2009 was not approved by COFA. This problem was taken up in a COFA meeting, and the result was that BNDES had to edit some parts of the report so that COFA could approve it. The changes in the report were in the way BNDES first presented the report. They first made the report more as a report of activities that seemingly was by BNDES. COFA on the other hand, wanted the report to have a focus on the Amazon Fund rather than BNDES. CTFA do not have any influence in the fund in the sense of authority.

## **5.2 What are the strategies of the Amazon Fund?**

This section deals with the strategies of the Amazon Fund and how the Fund is related to the federal policies on deforestation. Criteria and the guidelines for approving the projects will also be discussed. In addition to this, the MRV system of deforestation control will be looked at.

### **5.2.1 How well is the Amazon Fund integrated in the overall federal deforestation policy and what are the core strategies?**

According to the Amazon Fund's annual report (2009:60), the strategic aim of the Fund is to "reduce deforestation with sustainable development in the Amazon basin". The Fund was created in order to contribute to achieve a steady and continuous reduction of deforestation rates. Reduction of emissions from deforestation is also an aim emphasized by the Fund. To reach this aim, the Fund will support different activities, like projects and programs both from public and private actors and NGOs. Donations can be given by foreign governments. Preparations are also being done in order to receive money from multilateral institutions, NGOs, companies and individuals. The activities will receive non-reimbursable resources (Amazon Fund annual report 2009).

The Decree no. 6527/08 - the decree of the Amazon Fund - lists seven thematic areas the activities should stay within. These are:

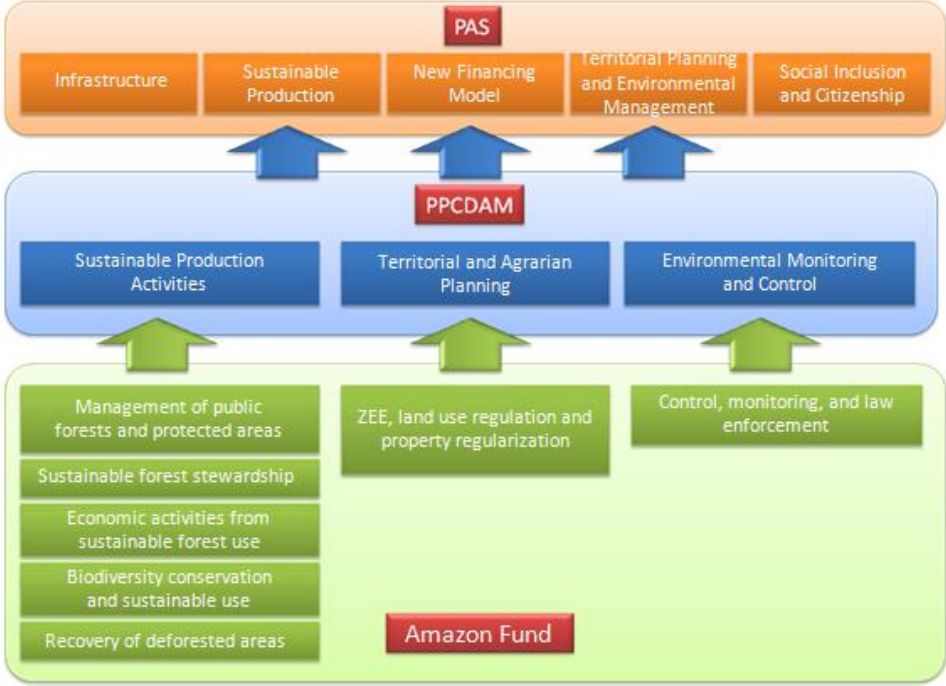
- “Management of public forests and protected areas
- Control, monitoring and environmental inspection
- Sustainable forest management
- Economic activities developed through the sustainable use of the forest
- Ecological and economic zoning, land-use planning and land-title regularization
- Conservation and sustainable use of biodiversity
- Recovery of deforested areas” (The Amazon Fund’s annual report 2009:23).

These areas are linked to the focus on “preventing, monitoring and combating deforestation and promoting conservation and sustainable use of the Amazon biome” (Amazon Fund’s annual report 2009:23).

Activities supported by the Fund should mainly be based in the Amazon biome. However, as mentioned in the introduction chapter, 20 % of the resources can be used in other Brazilian biomes and other tropical countries. Only activities related to development of monitoring systems and control of deforestation can be supported in biomes outside the Amazon (Decree no. 6527 2008).

The strategies of the Fund are fully linked to the directives of the Plan of action for the Prevention and Control of deforestation in the Legal Amazon (PPCDAM) (PPCDAM 2009; BNDES 2009) and Sustainable Amazon Plan (PAS) (BNDES 2010). According to Ramos (pers. mess. 2010), the Fund follows the directives of PPCDAM and PAS because PPDCAM and PAS already were established federal plans. Lourenço (pers. mess. 2010) argues it was also because of legitimacy issues. The main goal of the second phase of PPCDAM is to “promote a continuing reduction of the deforestation rates in the Brazilian Amazon, with a focus on zero illegal deforestation. This will be done by integrated actions of Agrarian and Territorial Planning, Monitoring and Control, and Fostering Sustainable Production Activities involving developing partnerships between federal public sector, state and municipal governments, entities from civil society and the private sector” (PPCDAM 2009:21).

PPCDAM and PAS are as shown in the background chapter two of the main national public plans to reduce deforestation. Figure 4 shows a diagram of what PPCDAM and PAS mainly consist of and the linkages between each other. It also shows how the Amazon Fund is related to the two plans. The five upper boxes are the main strategic points of PAS. The three boxes below show the three main points of PPCDAM (BNDES 2010), whereas the seven boxes at the bottom show the seven thematic areas of the Amazon Fund.



**Figure 4 Connections between the Amazon Fund, PPCDAM and PAS. Source: MMA (2008b)**

The implementations from PPCDAM should match with the strategic points of PAS. The implementations from PPCDAM should be connected to any of the three main points, which are stated in the blue boxes in the Figure. Projects must also match PAS’s strategies (MMA 2008b). Norad (2008) argues that there is no direct links between PAS and the Fund in relation to emission reductions. PAS has not an objective to achieve reduction of emissions from deforestation and degradation (Norad 2008). At the same time, some of PAS’s objectives may lead to reductions of emissions as they promote reduction of deforestation.

If one compares the 12 strategic directives of PPCDAM (PPCDAM 2009) and the seven thematic areas of the Fund, one could argue that the thematic areas fit the strategic directives. The thematic areas are quite broad and thus fit many of the directives.



In addition to PPCDAM and PAS, state plans for combating deforestation should be followed in each of the states where the Fund supports projects (McNeish et al. 2010; MMA 2008b). The Decree of the Amazon Fund (2008) states that each state in Legal Amazon only can have a vote in COFA if they have a plan for prevention and combat of deforestation in the state. Up to now, 7 of the 9 states have concluded their plan. Maranhão and Roraima are the only states that still elaborate their plan (Fundo Amazônia 2010). McNeish et al. (2010) argue, in addition to this, that Acre and Mato Grosso have been working considerably on their state climate policy. Up till now, the strategies of the Fund have been dealt with. Next section will discuss the criteria set by the Fund in order to approve projects and in relation to the strategies.

### **5.2.2 What are the criteria set to approve projects?**

The Fund has different criteria and guidelines to approve projects. These sets of criteria are minimum criteria for the projects, modalities of project resources, restrictions for resource usage, equity of resource application and priority criteria (MMA 2008b). This thesis will only look at priority criteria, which include thematic criteria as these are the most relevant for the discussion. The other sets of criteria will be placed as appendix 2. As mentioned in 5.1.3, COFA makes the criteria and guidelines to approve projects. Table 3 shows the priority criteria, where the Amazon biome, other biomes in Brazil and other countries are looked at separately from each other. Table 4 shows a more detailed table of the thematic criterion written in Table 3.

**Table 3 Priority criteria**

Cod.	Criterion	Amazon Biome	Other Biomes	Other Countries
P1	Geographic	<p>Projects carried in the 36 priority municipalities for prevention, monitoring and combat of deforestation</p> <p>Projects in the areas of influence of the PAC<sup>14</sup>.</p> <p>Projects carried out through municipalities / regions with higher conservation of the forest cover.</p>	Not applicable.	Not applicable.
P2	Thematic	(see table below)	Not applicable.	Not applicable.
P3	Diversity of stakeholders	Projects that involves in the designing and implementation involved in the public and private sectors, NGOs/social movements and local communities.	Same as the Amazon Biome	Projects that involves in the designing and implementation the public and private sectors, NGOs/social movements and local communities.

<sup>14</sup> The Brazilian Government Infrastructure Development Project

P4	Target public	Projects with direct benefits for traditional communities, agrarian reform settlements and small-scale farmers.	Not applicable.	Not applicable.
P5	Relevance	Projects with higher replication potential  Projects with higher impact potential (ex. R\$/ hectare of protected forest or sustainably managed)	Projects that develop and implement a long term monitoring methodology for REDD.	Countries with higher forest cover
P6	BNDES Project Lines	Prioritize the projects that contemplate (a) sustainable production activities and (d) scientific and technological development.	Not applicable.	Not applicable.

Source: MMA (2008b)

**Table 4 Thematic priority criteria**

General Orientation 2009	Priorities
<p>Actions to add value the standing forest (conservation and sustainable use)</p>	<p>Development and improvement of the scale of sustainable forest management and related chain of timber and non-timber-forest-products (NTFPs) including forest management projects, scientific and technological research, market development, training and qualification;</p> <p>Implementation of systems for the payment of environmental services associated to the improvement and/or maintenance of the forest cover and/or agroforestry systems;</p> <p>Development and implementation of restoration models for Permanent Preservation Areas (APPs)<sup>15</sup> and Legal Reserve<sup>16</sup>, with emphasis on economic use;</p> <p>Consolidation of the protected areas, specially Conservation Units for Sustainable Use and Indigenous Lands;</p>
<p>Actions to improve regional development and land tenure regularization.</p>	<p>Priority designation of areas of public forests without identified use, with priority for community forestry;</p> <p>Law enforcement against illegal public land occupation, land tenure regularization with preference to areas of higher concentration of informal land occupations and/or conflicts;</p>
<p>Actions to organize and integrate the systems of environmental control, monitoring, and enforcement in Brazilian</p>	<p>Support to the organization of the state level forest management institutions;</p> <p>Support to implementation of municipal systems of environmental monitoring and enforcement;</p> <p>Organization and integration of the forest management control systems, environmental licensing of the rural properties and chain of custody of</p>

<sup>15</sup> Permanent Forest Cover Area as described in the Brazilian Forest Law

<sup>16</sup> Percentage of forest cover to be maintained at each property according the Brazilian Forest Law

Amazon	farm, cattle and forest products;  Improvement systems for monitoring deforestation and forest degradation
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Source: MMA (2008b)

If one compares the thematic priority criteria (Table 4) with the seven thematic areas described in section 5.2.1, it shows that all the priorities under each of the three criteria can be categorized under one or several of the thematic areas. It seems like the criteria: “actions to add value the standing forest (conservation and sustainable use)”, taken from Table 4, can be categorized under most of the thematic areas, whereas the two other criteria generally can be categorized under the thematic areas called “control, monitoring and environmental inspection” and “ecological and economic zoning, land-use planning and land-title regularization”. These two thematic areas do not seem to support the first criteria. These findings demonstrate that the thematic priority criteria seem to be in line with the thematic areas decided by the Fund.

When comparing the priority criteria and the strategies of PPCDAM, the criteria should be based on PPCDAM. PPCDAM (2009:62) states that the “definition of the priorities for financing by the Fund must observe PPCDAM and the state plans of the control of deforestation”. This could be demonstrated by the priority municipalities for action set by PPCDAM. These priority municipalities are set as a factor under the geographic criteria in Table 3.

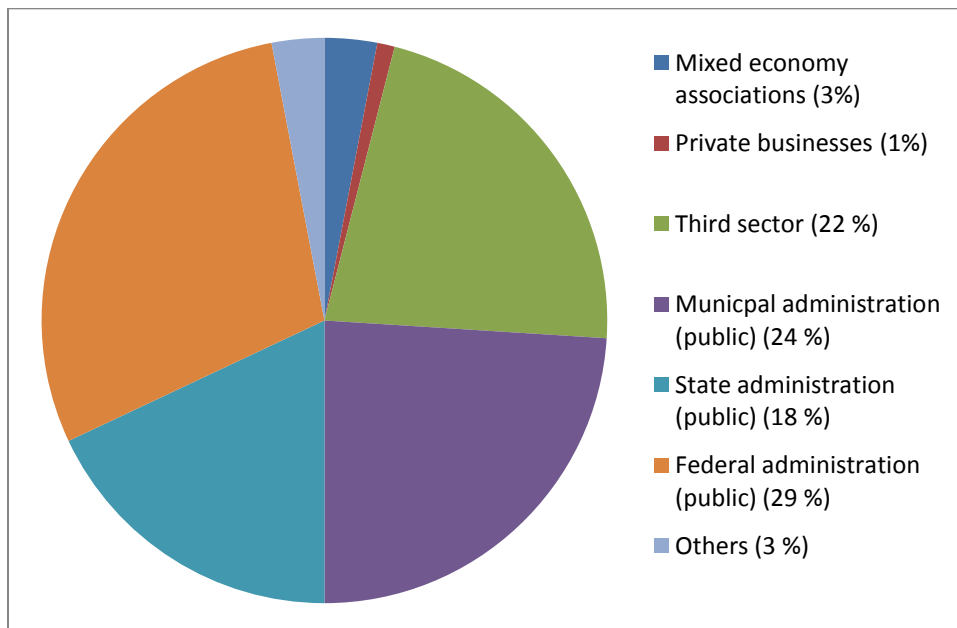
One issue that is not one of the criteria, but is more of a requirement, is the list of actors that can apply for the resources of the Fund. Those are (BNDES 2010:11):

- NGOs
- Civil society organizations with public interests
- Cooperatives
- Governmental and university research centers
- Scientific and technological institutes
- Foundations with interests in research
- Direct or indirect federal, state and municipality administration

- Private businesses

### 5.2.3 What types of activities have up till now being supported?

The application process consists of 6 steps that start with the registration of application and step 5 and 6 concern approval of the project and contract between BNDES and the project. As for 18.03.11, there are in total 68 projects that are in the application process. This includes 28 projects where the documentation is being registered, 29 projects that are in the steps of being analyzed and 14 that are approved. Figure 5 shows the different actors that are in the application process. This is taken from the website before the last project was approved. Thus, Figure 5 shows only the categories for 67 instead of 68 projects.



**Figure 5 An overview of the different actors presented in the application process. Source: Fundo Amazônia (2011c), translated into English from Portuguese**

Of the 14 projects supported, six are projects from either a state or municipality governmental administration. These cover the state of Acre, Amazonas and Pará, including the municipality of Alta Floresta and Marclândia in Mato Grosso. The sixth project on a state government level is called UEA Cartografia social and is within the State university of Amazonas. This project will do studies of usage and occupation of the land in 27 different communities in several of the Amazonian states. Six projects are in the third sector. The organizations The Nature

Conservancy (TNC), Instituto Ouro Verde (IOV), Imazon, Museu da Amazônia (MUSA), Instituto Floresta Tropical (IFT) and Fundação de Órgãos para Assistência Social e Educacional (FASE) which do have projects supported by the Fund are from NGOs. The two last projects supported, the second phase of Amazon Region Protection Areas project (ARPA) and Fundação Amazonas Sustentável (FAS), are public-private partnerships. IFT, ARPA and TNC are working in several of the Amazonian states, while the projects by FAS, MUSA, IOV, Imazon and FASE are only focused on a specific state; respectively Amazonas, Mato Grosso, and Pará (Fundo Amazônia 2011b). Figure 5 and the description above show that there are mainly two types of actors approved; namely public actors and NGOs. As this thesis is looking at the Brazilian REDD+ governance system, the next issue dealt with is finding out which of the three types of activities in the REDD+ literature described in chapter 2 the projects supported by the Amazon Fund may fit into.

#### *Categorization of projects according to REDD+ governance systems*

As showed in chapter 3.2, this thesis uses three types of activities that can be supported by a REDD+ governance system; projects, national programs and sector policies. The funding from the Amazon Fund will be additional to the budgetary contributions by the federal government (Donation agreement 2008). The additionality of the federal budget may demonstrate that sector policies cannot be supported by the Fund. However, this does not seem to apply for state and municipal budgets. This is demonstrated by the activity “estado do Acre” as this activity will strengthen Instituto de Meio Ambiente do Acre and the State Department of Forests, two organs within the state of Acre. Additionally, resources from the Fund will go to the elaboration of municipal plans for prevention and control of deforestation, in partnership with city halls (Fundo Amazônia 2011b). This means that up till now both projects and state sector budgets have been supported. There does not seem to be any national programs supported so far. Next, a more specific discussion on approval of small versus larger projects will be dealt with. Further, a discussion on private businesses will be given.

#### *Small projects*

Most of the projects supported are projects of a larger scale. BNDES has been criticized for not approving small projects. As seen in P4 in Table 3 in the priority criteria, small-scale

communities/farmers should be prioritized regarding social issues. Small-scale projects however, have not been prioritized up till now by BNDES. There are mainly two reasons for this. One of reasons is linked to the criteria and guidelines. Conde (pers. mess. 2010), Ramos (pers. mess. 2010) and Ehringhaus (pers. mess. 2010) argue that the guidelines and criteria are too broad. BNDES is at the same used to work in a different way than COFA's focus, even with its internal differences within COFA. Thus, BNDES would have needed clearer and more specific guidelines in order to approve projects more in accordance with COFA's wishes (Ramos pers. mess. 2010). Reason number two is more linked to the BNDES's way for operating, for example lack of transparency and another mindset regarding terms of operating. According to Conde (pers. mess. 2010), historically BNDES has focused more on big industrial development projects than of small project like indigenous organizations and rubber-tapper associations. Accioly (pers. mess. 2010) argues that BNDES have not been able to approve many of the small projects due to environmental legislation. All the projects must follow the environmental legislation, and this is difficult for many small projects. Accioly (pers. mess. 2010) also argues that small projects may be difficult to reach for the bank as many of them exist in remote areas. Nordang (pers. mess. 2010) argues that small projects often owe money to the state and it is therefore impossible for BNDES to give money to these projects. COFA and the Fund have been working and discussing a lot on this issue. According to Ramos (pers. mess. 2010), they have been looking at different options to be able to solve this. One of the solutions is for the Fund to use intermediaries that can work directly with the small projects. BNDES would give the intermediary money that they can control and distribute to the small projects. The approval of the 14th project seems to be a proof of a final agreement between COFA and BNDES. The 14th project approved is Federação de Órgãos para Assistência Social e Educacional (FASE). The objective of this activity is to support projects with small disbursements. These projects are typically traditional communities like indigenous communities, quilombolas and small-scale farmers (BNDES 2011). Quilombolas are descendents from black slaves. These communities often now live working with family agriculture, handicraft, gathering and fishing (Crepaldi and Peixoto 2010).

### *Private sector*

As can be seen by the list of supported projects above, there is no private businesses that have become supported yet. There have been different opinions within the Fund whether private



businesses should receive resources from the Fund or not. According to Ramos (pers. mess. 2011), BNDES was interested in lending money from the Fund to private businesses and the businesses could pay the money back. COFA on the other hand was not interested in this solution. For a while, BNDES therefore decided not to approve private businesses. However, BNDES and COFA finally came to the conclusion that the Fund could support some private businesses, with funding. Ramos (pers. mess. 2011) argues that BNDES will now only approve businesses that will not only benefit themselves from the support, but also benefit the public to a certain extent.

#### **5.2.4 What kind of MRV system has the Fund established to control deforestation and what kind of control system the Fund use on the projects to make sure that the projects fulfill the contracts?**

This section will describe the MRV system used to control the deforestation. It will also look at the control mechanism the Fund will use to make sure that the projects supported fulfill their contracts with BNDES.

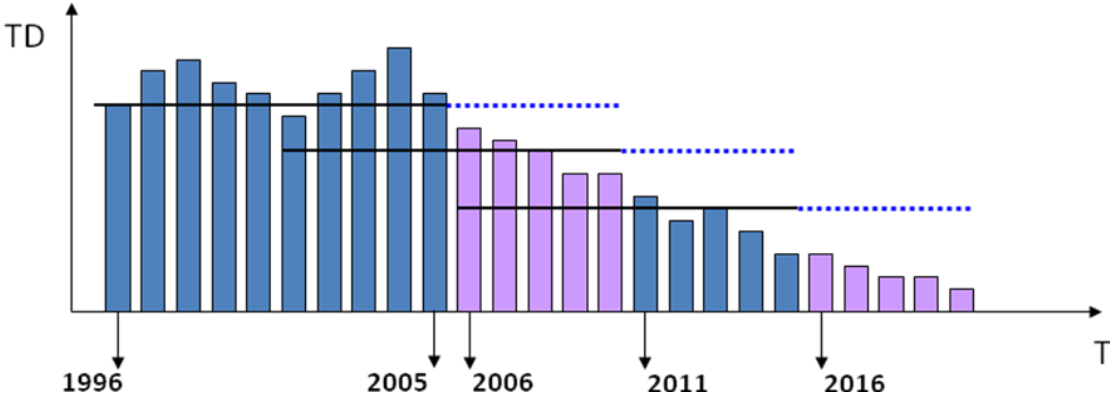
##### *The monitoring system to control deforestation*

The monitoring system used to control the reduction in deforestation of the national REDD+ governance system is based on monitoring data from INPE and calculations done by SFB. A reference level based on historic average deforestation rates is also defined (MMA 2008b). This will be elaborated more in the paragraphs below.

INPE started to monitor the deforestation for the first time in 1988. They have over time improved the monitoring system. In 2002, a monitoring program called Programa de Cálculo do Desflorestamento da Amazônia (PRODES) became ready. First in 2003 INPE started to use digital maps of the deforestation. The images used are from Landsat satellite series (Câmara et al. 2006), and they measure the increase of deforestation on each image (MMA 2008b). Problems of clouds are being dealt with by for instance using images from other satellites or data (Câmara et al. 2006). According to McNeish et al. (2010), a new satellite is likely to be introduced in the following years and this forest monitoring satellite will be called Amazon 1. It will be an improvement from Landsat as it will use higher resolution. PRODES

measures the deforestation rates from August to July. Thus, deforestation rates for 2010 are based on data from first of August 2009 until first of July 2010 (MMA 2008b). DETER is a program from INPE as well. According to McNeish et al. (2010), this is a monthly monitoring program where almost real time detection of clear-cuts above 25 ha is being registered. McNeish et al. (2010) argue that PRODES have detected more clear-cuts on patches below 25 ha. They explain this by arguing that people understand how DETER (Detecção de Desmatamento em tempo real) works and thus cuts on smaller patches (McNeish et al. 2010).

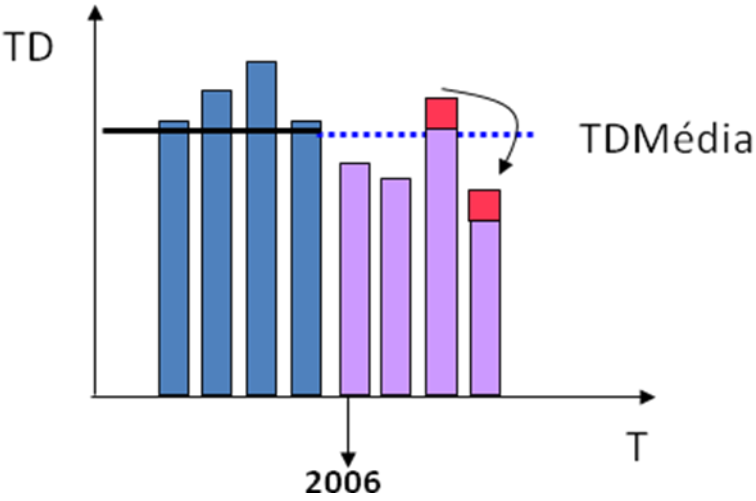
Annual deforestation rates will be compared with the average deforestation rate of the past 10 years. MMA (2008b:10) states that “these ten-year periods shall be updated every five years, so that the annual deforestation rates from 2006 to 2011 will be compared to the average deforestation from 1996 to 2005 (Average Deforestation Rates – ADR 1996-2005). In the following period, 2011 to 2015, annual deforestation rates will be compared with the average deforestation rates from 2001 to 2010”. This is shown in Figure 6 by shifting the reference level downwards. The new reference level will again shift downwards after 5 new years. The national REDD+ governance system will use ADR as a reference level. Figure 6 demonstrates the correlation between annual deforestation rates and ADR.



**Figure 6 A diagram showing the correlation between annual deforestation rates and reference level. Source: MMA (2008b)**

MMA (2008b) states that the first application year for the Fund will be based on the deforestation rate from 2006. Calculating the reference level for the first period of funding to the Fund, show an ADR of 1.95 million ha/year. The deforestation rate for 2006 was 1.4 million ha. Calculations that will be shown later in this section would tell that the Fund can

support activities “in proportion to the emissions avoided by saving 550 thousand hectares in forest cover” (MMA 2008b:11). This shows that the reference level and the annual deforestation rate will decide if the donor can donate the money the next year. If the annual deforestation rate one year is lower than the reference level, the Fund will receive donations. However, if the annual deforestation rate is at the reference level or higher, the Fund will not receive any donations the next year. In addition to this, if the deforestation rate is higher than the reference level, Brazil must add this amount to the next year’s deforestation rate, as shown in the Figure 7 (MMA 2008b).



**Figure 7 A diagram demonstrating the potential compensation for the annual deforestation rates higher than the reference level. Source: MMA (2008b)**

This shows that the Brazilian REDD+ governance system work with two systems of money flow. The first system decides whether and how much money should be donated to the fund. This system however, is independent from the system that concerns the disbursement to the projects. What will happen with the projects if the national deforestation rate increases? The disbursement from the Fund will anyway stop one year even if the projects do everything in accordance with their contracts with BNDES and they reduce deforestation in the local area. This raises a question of the necessity of the Fund on the national deforestation/emission agenda. It also raises the question whether the donations could be used in a more effective way rather than to the Amazon Fund.

The emission reduction from deforestation in tons of carbon calculations done by SFB will be based on the reference level and annual deforestation rates looked at above. In addition to this,

SFB will use a value of 100 tons of carbon per hectare (tC/ha) as a constant in the calculations. This constant is referred to as emission factor (EF) and is by MMA (2008b) considered to be a conservative value as the literature data lies between 130 to 320 tC/ha. 100 tC/ha is the same as 367 tCO<sub>2</sub>/ha.

The calculation done by SFB calculates the reduced emissions of deforestation in tons of carbon (RED) in the Amazon:

- $RED = (ADR - DR) \times EF$

RED = reduced emissions of deforestation

ADR = average deforestation rate

EF = emission factor

In addition to the monitoring described above which refers to the deforestation aspect of the strategic target of the Fund, the Fund also uses two other indicators to monitor the sustainable development aspect of the target. One of the indicators looks at the gross domestic product (GDP) for the states of Legal Amazon in relation to the national GDP. The other indicator deals with schooling rates of children from 7 to 14 years old in the states of Legal Amazon. According to BNDES (2010), the sustainable development may be monitored by these two indicators and also the indicator of annual deforestation rate (BNDES 2010).

### *The reporting*

INPE reports data from PRODES and this data will have an error bar on below 5 % (McNeish et al. 2010). This data will be reported to SFB so that they can calculate the avoided emissions from deforestation. McNeish et al. (2010) also state that the INPE has transparency in their data and they publish their data online. This can make it easier to have independent verification of the data (McNeish et al. 2010).

### *Verification*

The verification of the reduction of deforestation and reduction of emissions from deforestation was described in chapter 5.1.3.1. That section stated that CTFA verifies the data

from INPE and the calculation of avoided emissions done by SFB. This will therefore not be elaborated more in this section.

### *Control mechanism to make sure the projects fulfill the contracts*

One control mechanism is called the Logical Framework. According to the Amazon Fund annual report (2009:59), the logical framework is a “methodology used to ensure that funded efforts contribute to the overall objective of a program”. This will be done either by internal actors, like the ones who are responsible for the management, or external actors. This could be the general public (Amazon Fund annual report 2009; McNeish et al. 2010). The framework has four sub-programs, called components one to four. These components turn into four logical outlines “that share the same Strategic Target” (Annual report 2009: 60). This strategic target is to reduce deforestation and enhance sustainable development in the Amazon region. The seven subject areas made by the Fund, described in chapter 5.2.1, are adapted to the strategic target (annual report 2009).

Other control mechanisms are in this thesis only based on oral sources. According to Accioly (pers. mess. 2010), BNDES will check all the projects before the next donation is given to the projects. Ribenboim (pers. mess. 2011)<sup>17</sup>, who is the project coordinator in FAS, Olival (pers. mess. 2010)<sup>18</sup> who is the project coordinator in IOV, and May (pers. mess 2011) agree that if the projects fail to deliver what was in the contract, BNDES will stop the money flow to the specific project and the project must return all the money they have received from the Fund.

## **5.3 What characterizes the approved projects?**

This section will treat the question: “what characterizes the approved projects?” mainly based on four of the 14 approved projects so far. At the time in my fieldwork when I decided which projects to interview, it was only 9 that were projects approved. Thus, four projects were chosen for a more in-depth analysis. Two of the four projects were chosen as they seem to have the same goal as REDD, whereas the two last projects seemed to be on the edge of is the goal of REDD. Other projects were added to the list of approved projects during my

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<sup>17</sup> Gabriel Ribenboim is the project coordinator of the Bolsa Floresta Program in FAS, one of the projects I interviewed

<sup>18</sup> Alexandre Olival is the project coordinator in IOV, one of the projects I interviewed

fieldwork, but at that time there was not capacity to do other interviews than those four already chosen. One can argue that the four projects can be used as good examples in a study of the strengths and weaknesses of the Brazilian REDD+ governance system in relation to a REDD+ governance system. All approved projects will be used in the analysis. However, a focus will be on the four main projects.

### 5.3.1 Description of the projects

This section will briefly describe all the projects supported by the Fund. Table 5 will shortly give an explanation of what kind of project each of the projects are. Next, a more deeply description of the four projects that were interviewed will occur. Table 5 shows the size of the projects in terms of money and the currency used is the Brazilian real (R\$). R\$ 1 is equal to US\$ 0.64, or NOK 3.33.

#### Table 5 Overview of all the projects supported

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##### IOV

Type of actor: NGO

Amount of funding: R\$ 5 433

Amount of total cost for the project: R\$ 5 433

Duration of project: 3 years

Goal and activities: Recovery of degraded land in permanent preservation areas (PPA) and legal reserves. They also want to recover degraded land on small-scale agriculture activities

Geographic target: 1200 degraded land and 6 municipalities for agroforestry in northern part of Mato Grosso

Start-up of the project: Before they decided to apply for the resources of the Fund

##### FAS

Type of actor: Public-private partnership

Amount of funding (in million R\$): 19 169

Amount of total cost for the project (in million R\$): 29 935

Duration of the project: 5 years

Goal and activities: Reduce emissions of GHG caused by deforestation. Improving quality of

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life of traditional communities living in the forest is also a goal. This will be done through supporting two of the components in Bolsa Floresta where they support sustainable economic activities and strengthen the associations by the people living in protected areas in the state.

Geographic target: Amazonas

Start-up of the project: Before they decided to apply for the resources of the Fund

### TNC

Type of actor: NGO

Amount of funding: R\$ 16 000

Amount of total cost of the project: R\$ 19 200

Duration of the project: 3 years

Goal and activity: To register municipalities in CAR and to monitor deforestation with help from satellite images

Geographic target: 12 municipalities in Mato Grosso and Pará

Start up of the project: Before they decided to apply for the resources of the Fund

### Imazon

Type of actor: NGO

Amount of funding (in million R\$): 9 736

Amount of total cost of the project (in million R\$): 9 736

Duration of the project: 3 years

Goal and activities: Engaging the local community and state and federal government in raising environmental and rural data. Speed up inclusion of landowners into database land registration (CAR). They will also monitor the deforestation in the municipalities included in the project.

Geographic target: 6.6 million ha in 11 municipalities in Pará

Start-up of the project: n/a

### Second phase of ARPA

Type of actor: Public-private partnership

Amount of funding (in million R\$): 20 000

Amount of total cost of the project (in million R\$): 165 100

Duration of the project: 4 years

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Goal and activities: Combat deforestation and conserve biodiversity by designing and setting up protected areas.

Geographic target: 45.5 million ha in all of the Amazon

Start-up of the project: it was planned 2002/2003, but started in 2010

#### Department of environment in state of Pará

Type of actor: State administration

Amount of funding (in million R\$): 15 923

Amount of total cost of the project (in million R\$): 15 923

Duration of the project: 2 years

Goal and activities: Improve the environmental management through decentralization, and also to work with the technological infrastructure of CAR. They also want to raise environmental awareness.

Geographic target: State of Pará

Start-up of the project: n/a

#### State of Acre

Type of actor: State administration

Amount of funding (in million R\$): 60 000

Amount of total cost of the project (in million R\$): 66 700

Duration of project: 3 years

Goal and activities: Strengthen and broaden the current state policies on environmental issues through strengthening the strategies of land management of ecological and economic zoning. In addition, they want to strengthen the policies by promoting production chains of forest and agroforestry to reduce deforestation in areas close to the highway BR 364.

Geographic target: Acre

Start-up of the project: Before they decided to apply for the resources of the Fund

#### State of Amazonas

Type of actor: State administration

Amount of funding (in million R\$): 20 000

Amount of total cost of the project (in million R\$): 20 000

Duration of the project: 3 years

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Goal and activities: Strengthen environmental management through activities in municipalities that have high pressure of deforestation. They also want to focus on environmental monitoring and licensing in critical areas, and regularization of state owned land.

Geographic target: 4 municipalities in Amazonas

Start-up of the project: n/a

#### Municipality of Alta Floresta

Type of actor: Municipality administration

Amount of funding (in million R\$): 2 781

Amount of total cost of the project (in million R\$): 2 781

Duration of the project: 3 years

Goal and activities: Strengthen the environmental management in the municipality by including small, rural properties into CAR, achieving environmental diagnosis and promotion of degraded PPAs close to small properties

Geographic target: Alta Floresta

Start-up of the project: n/a

#### MUSA

Type of actor: NGO

Amount of funding (in million R\$): 8 454

Amount of total cost of the project (in million R\$): 8 454

Duration of the project: n/a

Goal and activities: Spread knowledge about conservation and the value of natural resources of the Amazon. This will be done through organizing a museum in situ of biodiversity and training of rural producers, agricultural technicians and students.

Geographic target: the Amazon

Start-up of the project: n/a

#### FASE

Type of actor: NGO

Amount of funding (in million R\$): 9 647

Amount of total cost of the project (in million R\$): 9 647

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Duration of the project: n/a

Goal and activities: Support small-scale socio-environmental projects. Approved projects must focus on at least four of the seven thematic areas to the Fund

Geographic target: Pará

Start-up of the project: n/a

### UEA Cartografia Social

Type of actor: University, state administration

Amount of funding (in million R\$): 4 615

Amount of total cost of the project (in million R\$): 4 615

Duration of the project: n/a

Goal and activities: Promote social mapping of several municipalities. Strengthen the research network connected to the project Nova Cartografia Social na Amazônia. This will be done by organizing integrated events for the research network and constructing a database for the results for this project. They will also readjust the physical space for the project network.

Geographic target: 27 communities in several states in the Amazon

Start-up of the project: n/a

### Municipality of Marclândia

Type of actor: Municipality administration

Amount of funding (in million R\$): 669

Amount of total cost of the project (in million R\$): 697

Duration of the project: n/a

Goal and activities: Strengthen the municipal department of environment by structuring the department and focusing on management of land and forest.

Geographic target: municipality of Marclândia

Start-up of the project: n/a

### IFT

Type of actor: NGO

Amount of funding (in million R\$): 7 449

Amount of total cost of the project (in million R\$): 12 498

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Duration of the project: n/a

Goal and activities: Raise awareness of good practices in forestry and forest management with multiple use of timber and non-timber products

Geographic target: the entire Amazon

Start-up of the project: n/a

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Source: The Amazon Fund (2011b); BNDES (2011); Oaltoacre news paper (2011)

Further, a deeper characterization of the four projects that were interviewed will be done. These four projects created by ARPA, FAS, IOV and TNC.

### *ARPA, second phase*

The Amazon Region Protected Areas Program (ARPA) is a public-private partnership where it works to conserve the tropical forests. The actors involved are the Brazilian Biodiversity Fund (Funbio) as the financial manager, Global Environment Facility as the first actor to fund the program through the World Bank, the German Development Bank (KfW) and World Wide Fund for Nature (WWF) Brazil. The Brazilian Ministry of the Environment coordinates the program and the implementation of the program is done by Instituto Chico Mendes de Conservação da Biodiversidade, which is a section in the environmental ministry and the Secretaries of the Environment of the Legal Amazon States. This program is divided into three phases. The first phase lasted from 2003 until 2008. The Fund will support the second phase of the program. This will last from 2010 to 2013 (Funbio 2011).

The motivation of the project is according to Leite (pers. mess. 2011)<sup>19</sup>, who works in Funbio, initially created due to the very high deforestation rate in the Amazon in the years of 2001-2002.

The plan of this phase is to create 13.5 million ha of protected areas (PAs). They will also strengthen 32 million ha of PAs, where 6.5 million ha already exist but is not yet inside the project of ARPA. The rest of the 32 million ha is already created by the fund (Fundo Amazônia 2011b).

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<sup>19</sup> Fábio Leite works in Funbio, the financial manager of the program of ARPA. ARPA is one of the projects I have interviewed

There are different priority criteria to decide on the PAs. Leite (pers. mess. 2011) argues that one of the criteria is that they are interested in protecting different smaller ecosystems in the Amazon. He argues that there exist approximately 100 different smaller ecosystems in the Amazon. ARPA may work with local communities; however, they choose not to work with indigenous communities and lands as these areas often are well protected (Leite pers. mess. 2011).

### *Bolsa Floresta*

The second project was created by Fundação Amazonas Sustentável (FAS). According to its website FAS (2011), FAS is a “public-private, independent and non-profit, non-governmental institution of public interest and without political party connections”. They created a forestry grant program called Bolsa Floresta and this was created in 2007. This program contains four components; family, income, association and social. Bolsa Floresta was the first payment for environmental services (PES) program in Brazil (FAS 2011). The Amazon Fund supports the association component and income component (Ribenboim pers. mess. 2010; McNeish et al. 2010).

Ribenboim (pers. mess. 2011) states that the main motivation for the program was to combat the deforestation in the state of Amazonas.

The support from the Fund will contribute to maintenance of 10 million ha of PAs (McNeish et al. 2010). McNeish et al. (2010) argue that the support from the Fund also will increase the number of families to be supported by the program from 6000-10000 to 60000 people. The website of Fundo Amazônia (2011b) states that the income component is related to the sustainable production chain of forest products. This can be honey, fruit species, nuts and wood. The association component on the other hand, is related to the local associations in the protected areas in order to empower the organizations and the social control. The payment to the families will go directly from the program to the families. According to Ribenboim (pers. mess. 2011), the families do not receive cash however. They talk with FAS and tell them what they need of equipment, etc. and FAS will buy these assets to the families.

According to Ribenboim (pers. mess. 2011), this program give priority to protected areas where there is poverty and pressure of deforestation. FAS can support areas from the whole

state of Amazonas, geographically speaking. However, they can only choose state protected areas. They cannot work with federal PAs or indigenous lands.

### *Sementes do Portal*

Sementes do Portal is a project developed by the Instituto Ouro Verde (IOV) in the northern state of Mato Grosso. This is a smaller activity compared to ARPA and Bolsa Floresta.

According to Olival (pers. mess. 2010), the main motivation for creating the project was lack of water in the area. This means that deforestation or emission reduction from deforestation is not a motive for this project.

The project's main goal is to recover 1200 ha degraded forests. This means restoration of permanent preservation areas and legal reserves. In addition to this, agroforestry will be encouraged as a type of family farming in 6 different municipalities in northern Mato Grosso (Fundo Amazônia 2011b). Olival (pers. mess. 2010) states that 213 families are being supported by the project up till now. He also states that in the agroforestry systems the species that are being used are local, and found specifically in each of the municipalities. In addition to this, almost none of the families have less than 40 different species in their system. The specific number of species varies a lot depending on the wish and need by the family. McNeish et al. (2010) state that these systems use a tillage technique called "mucava". This technique refers to zero tillage and includes different species of forest and crops. According to McNeish et al. (2010:44), issues important to the projects are: "strengthening of local associations in the process of environmental management; structuring of a selection of environmental services for technical support; targeting the environmental licensing of small properties; training and technical support; dissemination of information and socialization of knowledge". According to Olival (pers. mess. 2010), the technique of agroforestry was chosen because the technique was in close relation to the reality of the family farmers' way of living. It was also seen as a way to recover the degraded land and improve the environment. In addition to this, agroforestry was as an income generation as it is not only to save the standing forest, but it allows the family to sell or use the products for subsistence. The majority of the land that is now used as agroforestry was earlier used for cattle-ranching. The planning of the project was ready before they applied for the resources.

Olival (pers. mess. 2010) states that Sementes do Portal started as cooperation between the different social movements that work with family farming in the northern part of Mato Grosso. They were interested to create a project where the movements could work together. Thus, there were no priority criteria for which municipalities to work with.

### *Adequação Ambiental da Propriedade Rural – Controle do Desmatamento e conservação da biodiversidade na Amazônia Legal*

This project is developed by The Nature Conservancy (TNC) in Brazil. This NGO was created to work with protection of biodiversity (Fundo Amazônia 2011b).

According to Pinheiro (pers. mess. 2010)<sup>20</sup>, who works in TNC, the main motive of the project is to encourage farmers and producers of wood, livestock and soybean to register their property.

TNC works with municipalities in Mato Grosso and Pará (McNeish et al. 2010). Mato Grosso and Pará are the two states that accounts for having the highest rates of deforestation in the Amazon (Fundo Amazônia 2011b). According to the website of Fundo Amazônia (2011b), the participants will take part of a survey and they will register their property in the Rural Environmental Database. This is done through field research and use of satellite images. A cartographic database will help the mapping of property by demarcate Legal Reserves and permanent conservation areas (Fundo Amazônia 2011b). McNeish et al. (2010:44) argue that this project will “assist local land owners to adhere to environmental requirements and assist the wider monitoring of deforestation”. Pinheiro (pers. mess. 2010) argues that all farmers and producers in the 12 municipalities are encouraged to become part of the project.

### **5.3.2 Why did the different projects apply?**

All the four projects were created for other reasons than for the Fund, and the projects were already created when the project leaders applied for the resources.

IOV applied for the resources from the Fund was because it was looked at as a possibility to strengthen and enhance the project (Olival pers. mess. 2010).

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<sup>20</sup> Gustavo Pinheiro was the representative by TNC, one of the projects I interviewed

FAS applied for the resources from the fund due to another factor. According to Ribenboim (pers. mess. 2010), they needed the resources to cover some of the financial gap in their program. Bolsa Floresta was also fully planned before the Amazon Fund was created. According to Ribenboim (pers. mess. 2011), FAS argues that in order to combat the deforestation other factors than only to reduce the deforestation was needed. One of these factors was improvement of life quality of the population. The population also needed to take part in environmental activities. Other factors were investment of education, health, income generation and empowerment of the locals. Thus, FAS included these factors into the program (Ribenboim 2011).

ARPA seems to have partly the same reason as FAS for the applications of the resources from the Fund. Leite (pers. mess. 2011) states that they applied for the funds because they needed resources to the second phase of ARPA. In addition to this, they also had other reasons to apply for the resources. According to Leite (pers. mess. 2011), finding other sources of funding was not a problem to ARPA. They already had support from different banks, as shown above. But they chose to apply for the resources from the Fund as ARPA is focused on REDD. ARPA is a big program where millions of ha land are protected. He argues that studies have shown that ARPA contribute to a reduction of deforestation in the protected areas. Reduction of deforestation has also been shown near the protected areas. The reason for this however, is not clear. A third factor why they applied for the funds is, according to Leite (pers. mess. 2011), that they wanted a financial mechanism like the Amazon Fund to work well. He argues that up till now, reduction of deforestation has been fairly easy and cheap. Further reduction of deforestation however, will be more challenging and expensive. Thus, Brazil needs different kinds of financial mechanisms to be able to handle this challenge.

Pinheiro (pers. mess. 2010) state that TNC started their project before the Fund was created, and was interested in covering a financial gap. According to Pinheiro (pers. mess. 2010), TNC was originally interested in getting support to more municipalities from the Fund than they do today. He argues that there is an upper limit by the Fund, and thus, TNC now get support for 12 municipalities (Pinheiro pers. mess. 2010).

### **5.3.3 How well do the projects fit the strategies of the Amazon Fund?**

If one looks at all the projects approved by the Fund and compare them in relation to how many of the thematic areas looked at in chapter 5.2.1, one can see that the projects created by state and municipality governments seem to match better with the strategies of the Fund. This includes the project by department of environment in the state of Pará. This project includes all seven thematic areas and may on one hand be argued to match well with the strategies of the Fund. This is also the case of Marclândia, the municipality administration of Marclândia, Mato Grosso. In addition, projects introduced by the state of Amazonas and the state Acre also match well with the strategies of the Fund, respectively with six and five of the thematic areas. FAS also have high relevance to the Fund. This can be supported by the description of the project above, both in 5.3.1 and 5.3.2. As stated in Fundo Amazônia (2011b), the project by TNC only has two of the thematic areas. Both ARPA and Sementes do Portal match with three of the subject areas. On the other hand, comparing the projects to the seven thematic areas of the Fund like this does not give a complete picture of how each of the projects fit the strategies of the Fund. The projects are of different sizes, and even though the project by the municipality of Marclândia covers all the seven thematic areas, it does not mean that it will tackle the drivers of deforestation or reduce emissions from deforestation better than a project with less of a match with the thematic areas. As shown in section 5.3.1, the project by the municipality of Marclândia only receives R\$ 669 while the second phase of ARPA receives R\$ 20 000 million. Other factors may also interact.



**Table 6 Overview over which of the subject areas that each of the four projects fit under**

Thematic areas	ARPA	Bolsa Floresta	TNC	Sementes do Portal
Management of public forests and protected areas	x	x		
Control, monitoring and environmental inspection		x	x	
Sustainable forest management		x		
Economic activities developed through sustainable use of forest		x		x
Ecological and economic zoning, land-use planning and land-title regularization	x		x	
Conservation and sustainable use of biodiversity	x	x		x
Recovery and deforested areas				x

Source: Taken Fundo Amazônia (2011b)

The four projects looked at in chapter 5.3.1 will be used in order to go deeper into the discussion of the strategies of the Fund. The discussion in chapter 5.3.2 shows that even though none of the projects were created due to the Fund, several of the projects were created because they were interested in reducing deforestation. The project by TNC seems to be interested in combating parts of the illegal deforestation by register the producers of livestock and soybean. They also help the process of making it easier to monitor deforestation. ARPA and Bolsa Floresta seem to be the projects that are mostly related to reduction of deforestation. ARPA are more focused on only deforestation whereas FAS also includes factors that may lead to local poverty alleviation. ARPA may also enhance local poverty alleviation to a certain extent as they also work with some local communities. However, this is not their main goal. TNC on the other hand, may affect the poor, landless people in a negative way. Pinheiro (pers. mess. 2010) argues that as the products from land that does not causes deforestation will increase in value for the buyers, the products from this land become more expensive. This may lead to higher standard of living and higher prices of land.

Consequently, rent of the land will increase (Pinheiro pers. mess. 2010). Thus, this may cause the landless poor to not afford to rent the land.

If the priority criteria from Table 3 in section 5.2.2 are compared with the supported projects some of the criteria seem to be covered well, while some do not seem to be covered so well at this moment. The geographic criteria relate to 36 priority municipalities from PPCDAM. Four out of 12 municipalities that participate in the project by TNC is listed as priority municipalities. The municipality of Marclândia is one of the municipalities on the list and IOV also work with 2 out of 7 municipalities from the priority list. One factor that does not seem to be covered so well is the traditional communities, like indigenous people. Supporting traditional communities is a factor under the priority criteria “target public” in Table 3. So far, FAS is a project that works directly with traditional communities. FASE is another possible actor that does that. Petterson (2011) argues, based on an interview with Adriana Ramos, that BNDES does not follow up on this priority criterion. BNDES has been used to work with big development projects only. Based on the complexity around the evaluation process of small projects, in particular indigenous groups, BNDES has not approved these projects. Even though FAS is supported, Petterson (2011) argues that other indigenous groups and projects should be able to apply directly to the Fund.

As only four out of 14 projects went through in-depth interviews, these results may have been a little different with more in-depth interviews.

#### **5.3.4 How does the project administration follow up on the development of the projects?**

All the projects interviewed seemed to have well organized plans for following up of the development of the projects.

FAS have two different kinds of mechanisms to follow up on the development of Bolsa Floresta (Ribenkoim pers. mess. 2011). First of all, they have their own monitoring systems which monitor deforestation, and also social and economic aspects. In addition to do this, they have a biodiversity monitoring system. Different methodologies are used for the different kinds of monitoring. Ribenkoim (pers. mess. 2011) states that FAS has to show their achievements in accordance with the contract to be able to receive the next funding from

BNDES. This includes number of families that receives the money, income generation per capita, numbers of workshop for the income generation program and number of businesses. Secondly, Ribenboim (pers. mess. 2011) argues that they also have a control system if the families in the program do not participate as they should. If the family for instance deforests more than they should, the family gets a yellow card from the program. FAS will help them to get in compliance with the program again. But if they deforest again, they will receive a red card. This means, according to Ribenboim (pers. mess. 2011), that the family is out of the program for at least two years. To become part of the program again, the family needs to be approved by the local associations.

IOV also seems to have two kinds of mechanisms to follow up the development of Sementes do Portal. Firstly, Olival (pers. mess. 2010) states every third month the NGO will check 10 % of areas (21 properties) in the project to see how each of the species are growing (Olival pers. mess. 2010). They will, according to Olival (pers. mess. 2010), do this by counting which species are growing and the height of the plants. As this is a lot of work, the rest of the properties will be monitored with pictures. IOV also have created Rede de Sementes do Portal da Amazônia, which is an organization that was created to help people that works with seeds (semente in Portuguese). This organization meets every month where they discuss what kinds of seeds each of them are collecting. This year a course for the environmental leaders will start, where each municipality have 1-4 participants (Olival pers. mess. 2010). Second of all, he argues that each of the municipality have a few chosen coordinators for the local project, plus a technician from IOV. These groups of five to six people are responsible for what is happening in each municipality, both defining what will happen and controlling (Olival pers. mess. 2010).

TNC choose to have an employee of TNC working in each of the municipalities (Pinheiro pers. mess. 2010). He states that it is their job to control and monitor the activities within their municipality. If a municipality is not interested in participating anymore, Pinheiro (pers. mess. 2010) argue that TNC will go to BNDES ask if they can choose another municipality.

ARPA works in 60 different areas (Leite pers. mess. 2011). Leite (pers. mess. 2011) argues that one of their methods to control their protected areas is to use policemen to control the area every day. Other areas are more remote and it will be impossible to monitor everything there. But often rivers are the only way to access the protected area and this river is then controlled by a person placed there by ARPA. ARPA also have a monitoring system that

detects the deforestation. If this system shows deforestation, they will go to the place and find out what happens and find a solution (Leite pers. mess. 2011).

## **5.4 Does the Amazon Fund function well to the REDD+ governance system criteria?**

In this section I will describe and discuss the criteria for governance systems in relation to REDD+. The criteria are as mentioned in the theory chapter political legitimacy, effectiveness, efficiency and co-benefits.

### **5.4.1 Political legitimacy**

According to McNeish et al. (2010), COFA is an important actor regarding the overall political legitimacy of the Amazon Fund. Key participants both from the federal government and from the civil society are represented. Even representatives from the industry are included. Each of the states in Legal Amazon is also represented. The system for decision-making of the guidelines shows that all the three parts of COFA have equal power (Lourenço pers. mess. 2010).

Ramos (pers. mess. 2010), as a member of COFA, and Conde (pers. mess. 2010), as an actor outside the Fund, generally argue that BNDES was a good choice as administrator. Given the good reputation BNDES has as a bank regarding corruption among other things, they agree that the bank is well suited for the tasks. Lourenço (pers. mess 2010) also states that the best solution for the Fund is that BNDES indeed has all the authority regarding decision-making. Several of the actors within COFA are potential applicants for the resources of the Fund; this involves both state governments and the civil society. Thus, COFA should not have any power to take decisions. The main challenge however, concerns transparency. The Fund is a new experience for BNDES. It is a big bank used to work in a certain way. They are used to the policy of “bank secrecy”. COFA argues that the bank should be transparent with the bank’s work regarding the Fund. However, being transparent becomes a challenge for BNDES. Bank secrecy means that “one of the conditions of the relationship between a bank and its customers is that the customers' dealings and financial affairs will be treated as

confidential” (Business dictionary 2011). They may therefore be reluctant to share information about projects and how they choose which projects to approve. COFA on the other hand, works as an organization where they are interested to know who receives money for what and why one project was approved while another was not (Conde pers. mess. 2010). Ramos (pers. mess. 2010) is arguing that by increasing the level of transparency, this would raise the probability of fair and adequate procedures. In this way, COFA could follow and control if BNDES is following the guidelines and criteria COFA is responsible for. They could also understand why the different projects are being selected. This discussion shows that the political legitimacy concerning BNDES is not straight forward. Both informants inside the Fund and outside the Fund understand why the bank was chosen as the administrator. However, they also saw negatively on the issue of transparency which is likely to affect the political legitimacy.

As mentioned in section 5.3.3, indigenous projects have more or less become excluded from the resources of the Fund. As I was observing a conference about the Amazon Fund 20.10.10, I could see that indigenous groups from the Amazon were not satisfied with the application process for resources by the Fund. Especially one indigenous group felt that they were overlooked by BNDES and that it was too complicated for them to apply. This person was also frustrated with FAS, as FAS was approved and this group not. This demonstrates also what was discussed in section 5.3.3 about this issue; that also indigenous groups should be able to apply directly to the Fund. These observations may show that the Fund may not have high political legitimacy from indigenous groups’ point of view.

This section would have been more complete with several informants, from outside the Fund in particular.

#### **5.4.2 Effectiveness**

It is important to distinguish between the Amazon Fund where only the projects are focused on and the national REDD+ system when the effectiveness criteria are discussed. Looking at the Amazon Fund, only additionality seems to be in focus. In the donation agreement between Norway and Brazil (2008:1) it is stated that the donations and the projects should be “additional to significant budgetary contributions by the Brazilian Federal Government in deforestation-reducing activities”. This means that the Fund should support only projects and

programmes that would not be supported by the federal government (Ehringhaus pers. mess. 2010). Leakage control and permanence are not focused on in the projects. However, leakage is an important factor on the national REDD+ system. Due to the capacity of INPE, Ramos (pers. mess. 2010), Lourenço (pers. mess. 2010) and Santilli (pers. mess. 2010) were not concerned with leakage in the Amazon biome. INPE has already good monitoring systems to be able to control this. Deforestation does not only happen in the Amazon. However, deforestation occurs both in the Cerrado and Atlantic rainforest. At this moment there is no leakage control between these biomes and the rest of the Brazilian biomes and some of the informants seemed to be more concerned about this. Lourenço (pers. mess. 2010) however, argues that INPE is now working on trying to control the leakage in the Cerrado and Atlantic rainforest and that in the future a national leakage control should be established. They also seem to be concerned with leakage control across national borders (Ramos pers. mess. 2010; Lourenço 2010; Santilli pers. mess 2010). Permanence on the other hand, does not seem to be much focused (Ramos pers. mess. 2010 and Lourenço pers. mess. 2010).

Risk of corruption is seen as an important factor within BNDES as a bank. Ehringhaus (pers. mess. 2010) states that decisions in the bank are always taken by more than one person. Accioly (pers. mess. 2010) argues that BNDES do not approve projects that seem to be corrupt. Lourenço (pers. mess. 2010) seems to be concerned that BNDES is too focused on corruption. He argues that they have high criteria on corruption and this may prevent small projects to be approved.

### **5.4.3 Efficiency**

It is stated in the decree of the Amazon Fund that BNDES should only spend 3 % of the donations on management costs (Decreto n<sup>o</sup> 6527 2008). The fund was therefore seen as a cost-effective fund. Ramos (pers. mess. 2010), Accioly (pers. mess. 2010) and Ehringhaus (pers. mess. 2010) however, state that BNDES do not know how much they have used. All three also argue that it is likely to be above 3 %. This is not seen as a problem. Instead, Ehringhaus (pers. mess. 2010) and Accioly (pers. mess. 2010) confirm that BNDES will use BNDES's own money in the case they have used higher costs than planned. According to Ehringhaus (pers. mess. 2010), one of the reasons for the higher use of costs is due to operational costs within BNDES as a bank. These costs include the application process for the

projects. As also mentioned in 6.2.4, the transaction costs for the project to apply for the Fund may be too high for some projects. This may lead to exclusion of some projects and may in this way reduce the efficiency of the Fund. Efficiency also involves looking at how the governance system evaluates the cheapest projects to support. However, due to lack of time, this has not been focused on in this thesis.

#### **5.4.4 Co-benefits**

Poverty alleviation is a heavily discussed issue in the Amazon Fund. Accioly (pers. mess. 2010) argues that poverty is a huge challenge and BNDES is focusing on poverty reduction when they approve projects. This is an important factor to tackle the problem of deforestation. Several actors within COFA and several actors in the civil society both in Brazil and Norway claim that BNDES has been too slow in the project approval process. BNDES on the other hand, claims that poverty reduction is one of the reasons why the approval process has been slow. They need to be sure that the right projects are being approved in order to tackle the different challenges related to deforestation. Santilli (pers. mess. 2010) argues however, it will be difficult to reduce poverty in Amazônia as majority of the poor will not be supported by the Fund. It can on the other hand be argued that local poverty can be reduced with help from the Amazon Fund. However, some informants argue that poverty alleviation has so far not been prioritized.

Approving small projects is looked at as one way to reduce poverty in addition to deforestation in the Amazon by several actors (Ramos pers. mess. 2010). Nobre (pers. mess. 2011) on the other hand, argues differently. He claims that the Amazon Fund can help to reduce the poverty by being part of a national plan to create a new economic model for the Amazon. By being able to reduce the deforestation close to zero, Nobre (pers. mess. 2011) argues that a new economic model must be introduced in the Amazon. Focusing on approving larger projects to achieve this would be better than approving small projects. Nobre (pers. mess. 2011) bases this argument on experiences from Pilot program to conserve the Brazilian rainforest (PPG7). PPG7 was established in the 1990s to “maximize the environmental benefits of rain forests through the implementation of pioneering projects that contribute to the ongoing reduction of the deforestation rate in Brazil” (World Bank 2009) and they mainly focused on projects organized by poor people (Lourenço pers. mess. 2010). According to

Nobre (pers. mess. 2011) PPG7 failed in the sense of reducing poverty and at the same time decrease deforestation. I observed opposing opinions about the results from PPG7 by different informants. However, the new economic model would, according to Nobre (pers. mess. 2011), reduce poverty.

The first co-benefit to be looked at is biodiversity preservation. One of the seven areas that BNDES emphasize when approving a project is about biodiversity. They approve projects and programs that work with preservation and sustainable use of biodiversity (Fundo Amazônia 2011a). Accioly (pers. mess. 2010) confirms this by saying that biodiversity is a concern and it is indeed one of the factors they are looking at when approving projects.



## **Chapter 6 Discussion**

In this chapter the main research objective will be discussed. The chapter will consist of two main sections. The first section will look at the Amazon Fund in relation to the bigger picture. Brazil is currently developing a full REDD+ governance system. So far, the Amazon Fund is the only existing national REDD+ system. The second section will discuss the internal relations in the governance system.

### **6.1 The Amazon Fund in relation to the overall deforestation policies in Brazil**

This section will look at whether the Amazon Fund will be a good system to solve the issue of drivers of deforestation if the Fund will continue to be the national REDD+ governance system.

#### **6.1.1 Separate national fund versus fund within state administration**

I will try to categorize the Brazilian REDD+ governance system into one of the REDD+ governance systems. Only separate national fund and a national fund within state administration will be discussed as the Amazon Fund is a fund. May (2009) in Vatn and Angelsen (2009) places the Fund as a national fund within state administration. This is argued by stating that the Fund is placed under an agency under the ministry. Zadek et al. (2010) on the other hand places the fund together with conservation trust funds (CTFs), which is referred to in the chapter 3.2 as a separate national fund.

If one looks at the description of a national fund within state administration in chapter 3.2.1, it could be argued that the Amazon Fund is a fund within state administration as BNDES is a public bank. However, as also stated in section 5.2.1, the bank follows a private law. The private law is partly the reason why the Fund is considered private. This shows that the Fund neither is a pure separate national fund nor a pure fund within state administration, but lies somewhere between these two. The discussion will further look at whether the Fund lies more towards a separate fund or a state administration fund.

Zadek et al. (2010) argue that the Fund has more influence from other stakeholders than from the government. The civil society has a strong voice within COFA. At least the Brazilian forum for NGOs (FBMOS), but also others from COFA, showed a strong voice regarding small projects and the private sector for example. In addition to this, there is no money coming from the government to the Fund and the Fund will support additional activities to the significant budgetary contributions by the federal government. However, as the governance of the Fund shows, only one third of COFA is from the civil society. The rest of COFA is either related to the federal or state governments, and the president of COFA is the Minister of Environment. BNDES is indeed a public bank, however in this case legally fully autonomous from the federal government. The objectives used in the Fund were established by the federal government and the strategies are fully linked to the federal government. Thus, I will disagree with the statement by Zadek et al. (2010). I would argue that the Fund lies closer to a fund within state administration than to a separate national fund.

As shown in section 5.1.1, the Brazilian government was interested in a governance system which would allow the system to reach out to all kind of organizations in the society. The Fund has demonstrated that it has been difficult to reach out to all types of organizations, due to difference in interests and different ways of operating by the various actors within the Fund. At this point no federal activities are being supported. Neither are small projects governed by indigenous groups for example. Indigenous groups can be argued to be important actors in the reduction of deforestation in Brazil. If a pure fund within the state administration was created instead, money could be spent on different relevant sector policies and in this way be used more sufficiently regarding the critical drivers of deforestation. However, having the fund within the state administration and used on a federal level, McNeish et al. (2010) demonstrate that the money could potentially be misused by the government in the federal budget in case of economic crisis. This is also the argument used for the reason why the Fund does not support federal level activities today. As discussed in 3.2.1, a fund can also stay inside the national administration also when a public agency or government owned corporation administers the fund. This gives the fund more autonomy and the government would not take part in the decision-making regarding the money. This could potentially be an alternative solution for a national REDD+ governance system in Brazil. BNDES could be used as an administrator and the money could go to sector politics on a federal level as well. This alternative however, is likely not to reach out to the small projects and the poor. I would

argue that the Fund as it is today, with a more project-based approach, will have a higher change to reach out to the poor as the civil society has such a strong voice within the Fund.

### **6.1.2 The Amazon Fund and the federal deforestation policy**

The Amazon Fund, as demonstrated in section 5.2.1, seems to match the strategic guidelines of PPCDAM. The strategic directives of the Fund are wide and seem to be linked to very many of PPCDAM's guideline directives. If the Fund will be used as the national REDD+ governance system also in the future, will this fund be able to change the drivers of deforestation to the extent that there will be a continuous reduction of deforestation? Section 2.4 shows that policies on reduction of deforestation have the last few years been prioritized by the federal state. However, section 2.3 demonstrates that other factors beyond federal political control can determine the deforestation. Historically there has been shown strong correlations between the international food market/prices, including soy and meat, and deforestation. Even with high focus on reduction of deforestation in Brazil today, a change towards increased deforestation rates may happen in the future. Nonetheless, the Fund has been used only as a contribution to the federal plans and policies on reduction of deforestation. The Brazilian government has said that they need "US\$ 1 billion a year of international contributions to fully implement its medium term plan for protection of the Amazon" (Zadek et al. 2010:13-14). Until now, BNDES has approved projects with a total of US\$ 128 million (BNDES 2011). At the same time, the total donation to the Fund from Norway and Germany will be US\$ 1.03 billion. Thus, over the next years the Fund will receive the total amount from the donor countries (if the deforestation rate decreases). This shows that the donations are a contribution to the total amount Brazil need from the international community. However, it is just a portion of the overall deforestation policy in Brazil.

According to McNeish et al. (2010) and Accioly (pers. mess. 2010), there seems to be a change in the deforestation pattern in the Amazon. Until now, the target seems to have been the large-scale deforestation as this is the type of deforestation that has being reduced until now. Accioly (pers. mess. 2010) argues that small-scale deforestation on the other hand now seem to increase in the Amazon. The small-scale deforestation is more difficult to detect on the monitoring system as it covers smaller areas over a larger geographical area. How is the

Amazon Fund equipped to deal with this change of pattern in deforestation? This has not been a focus in the strategies of the Fund. However, BNDES is aware of this challenge, and could therefore approve new projects strategically to deal with this.

Looking at the already approved projects, one can ask the question if the projects will be able to tackle the drivers of deforestation. If all projects supported by the Fund are taken into consideration, it has been argued by McNeish et al (2010) that the projects will not manage to tackle the critical drivers of deforestation. Informants in McNeish et al. (2010) state that the projects supported so far has been approved more in line with a focus on showing results at COP meetings than with the overall strategy. However, I would argue that the projects should not be looked at as one unit. The projects that deal with CAR seem to work with the illegal aspects of the drivers. As section 5.3.1 shows, TNC focus on land registration of producers of soy and cattle in Mato Grosso and Pará. In addition to the impacts on the illegal deforestation, they focus directly on the two main drivers of deforestation. Supporting state and municipality administrations can be argued to potentially improve the chances of permanence of the Fund and change the drivers of deforestation. As shown in the analysis, many of the state administrations use the donations from the Fund to strengthen their administrations. This may potentially help to change the drivers within each of the states. However, the international demand for meat and soy is difficult to tackle at this level, but not impossible as the state governments can use policies to encourage farmers to cultivate soybean and raise cattle outside the Amazon biome. A project like Sementes do Portal by IOV on the other hand, may not deal with the drivers in the same way as it focus on degraded land. The second phase of ARPA is another project that does not fully focus on the critical drivers as their prioritization is protection of the different ecosystems in the whole Amazon. However, they take pressured areas into consideration when deciding on which areas to protect. But they also protect remote areas that may not be in high danger of being deforested.

The paragraph above shows that there are some projects that seem to be dealing with the critical drivers of deforestation while other does not. Based on this, I would argue that the essential drivers of deforestation may not be one of the main criteria when the Fund approves a project.

The analysis chapter shows that degradation is not included in the measurements of emission reduction in the Brazilian REDD+ governance system. If degradation had been included, there might have been different numbers of donations to the Fund. The Amazon Fund was created

in order to get compensation for reduced deforestation only. The Amazon Fund and the last “D” in the concept of REDD+ were both introduced in 2007, at the same COP-meeting. Thus, on the one hand, it is understandable that the Fund did not include degradation in the beginning. On the other hand, the Fund was not created until 2008 and thus, they would have time to include this.

### **6.1.3 The MRV system**

The MRV system for the Brazilian REDD+ governance system is based on monitoring and reporting by INPE and also reporting of emission data from SFB. The CTFA do the verification of the data. This section will in addition to my findings base some of the discussion on the report by McNeish et al. (2010). That report add some valuable results that I think is important to be included in my discussion.

McNeish et al. (2010) argue that INPE does not have any independent verification. As with most developing countries, an independent verification for deforestation and emission is a politically sensitive issue in Brazil. According to McNeish et al. (2010), Imazon is a NGO that work towards more forest transparency, and their data are sometimes different from the data of INPE. This shows that an independent verification and also an agreed methodology used for deforestation monitoring would be necessary in an international REDD+ scheme (McNeish et al. 2010). This may be a weakness with the Amazon Fund. They use CTFA as verifying actor. The six scientists in CTFA are from different organizations, including one from INPE. This can be used in an argument saying that CTFA is not completely independent from INPE as the person from INPE may be influenced by its own organization.

As mentioned in 6.1.1, the Amazon Fund’s MRV system only focuses on deforestation, and not on degradation. Including degradation into the Fund’s MRV system does not seem to be very difficult as INPE also has a detection program for degradation, called DEGRAD. According to McNeish et al. (2010), this system has detected an increase in degradation in the Amazon. This shows that a program like DEGRAD is necessary in the national REDD+ governance system. The costs of including this mechanism into the Fund should not be too high either as INPE already has a monitoring system for degradation in the Amazon.

Intra-biome leakage control is, as shown in section 5.4, not seen as a big problem to some of the informants. However, McNeish et al. (2010) argue that this has not been formally researched so far. Their findings also showed that leakage within the Amazon biome seems to be very local. According to McNeish et al. (2010), this is important regarding sub-national REDD activities. Sub-national REDD+ activities has been criticized for potential problems with leakage. This observation shows however, that “monitoring and quantifying leakage in leakage belt areas around individual REDD+ project areas should be possible, and activities at sub-national scale, understood as activities implemented at level of Brazilian States and below, may be considered eligible for direct international incentives” (McNeish et al. 2010:32). This was an interesting finding regarding the Amazon Fund. The Amazon Fund consists only of sub-national activities, both REDD related and non-REDD related projects. From my knowledge, I would argue that the Fund, at this moment, does not use this type of leakage belt. If one also takes into consideration the new emerging pattern of deforestation, this is an improvement the Amazon Fund could do in order to become a better REDD+ governance system.

#### **6.1.4 Other biomes**

The monitoring system discussed above is only in the Amazon. According to McNeish et al. (2010), PRODES is not used in other biomes. The Fund can allocate 20 % of the resources to monitoring purposes in both other biomes in Brazil and outside Brazil. Thus, Cerrado, the savanna woodland biome in Brazil, is a potential receiver of some of the donations from the Fund for monitoring activities. Some argue that the Cerrado should get more focus regarding GHG emission reduction. Sawyer (2010) argues that the Cerrado emits more than the Amazon as there are much higher rate of land-use change in the Cerrado compared to the Amazon. This includes emission from both above ground biomass and below ground biomass as Cerrado has two-third of its biomass below ground. According to Kauffman et al. (2009), 95-99% of all the carbon lies below ground in the woodland area of Cerrado. Klink and Machado (2005) state that 55 % of the Cerrado biome has been cleared and is now used for human purposes. The deforestation rate is also higher in the Cerrado than in the Amazon. There is also a high level of biodiversity. According to Klink and Machado (2005), Cerrado has very high endemism and also high habitat diversity. Sawyer (2010) argues therefore that the Fund should also have included control mechanisms for land use change in the Cerrado. However,

as mentioned in the analysis chapter, COFA consists of actors from each of the Amazon state governments. Thus, Sawyer (2010:4) also argues that “there is a clear conflict of interest regarding allocation of funds outside the Brazilian Amazon”. This may also include the Atlantic Forest, another tropical forest in Brazil. The decision that the allocation of resources from the Fund outside the Amazon only should include monitoring activities was stated in the presidential decree of the Fund. However, would COFA have fought more for resource allocation to other biomes if not one third of COFA consisted of state governments? This is an interesting debate that this thesis does not have a capacity to handle, but would have been interesting in further research.

Since the Amazon Fund will use up to 20 % of the resources on monitoring purposes in other biomes, inter-biome leakage can be argued to be taken into consideration to a certain extent when the Fund was created. However, so far, not any projects outside the Amazon are being supported. As argued in section 5.4, the lack of leakage control between the different biomes in Brazil is seen as a weakness in the national REDD+ system. The paragraph above also shows the necessity of an inter-biome leakage control in Brazil.

### **6.1.5 Autonomy of the Fund**

Section 5.1.2 discusses the autonomy of the Fund in relation to the federal government. The chapter states that the Fund has total autonomy from the government. However, if one looks at the members of COFA, one third of the members are from the federal government and Izabella Teixeira, the Minister of Environment, was in late 2010 reelected to become the president of COFA (Ramos pers. mess.2011). Thus, one may argue that the federal government to a certain extent has influence in COFA. This may also indirectly give some power to COFA in the Fund. This might lead to a balance of power between BNDES and COFA even though BNDES has the full authority. This means that it still is BNDES that take all the decisions. However, COFA may be in a higher position to control BNDES in the sense that BNDES feel more obligated to follow the criteria and guidelines set by COFA. The example given in chapter 5.1.3 about the annual report from 2009 could be an example of this balance of power. One may also argue that with the Minister of Environment as the president of COFA, the Fund may not be completely autonomous from the federal government.

## **6.2 Internal relations**

This section will look at more internal issues, and whether the Fund with its internal factors/conflicts/issues will function well as a REDD+ governance system

### **6.2.1 Competency conflicts**

Within the Amazon Fund there are some competency conflicts. The Fund has managed to come to an agreement in some of the conflicts while others are still unresolved. Most of the competency conflicts are between BNDES and COFA, while one particular disagreement concerns CTFA and its responsibilities.

Some of the disagreements between BNDES and COFA have been discussed in the analysis chapter. These are for example the discussions on small projects, private businesses and the change of COFA's annual report. The issue of small projects now seems to get more and more attention. According to Durão (2011), BNDES will now focus more on approving partnerships that is associated with small projects, in addition to the already similar approved project, FASE. Private businesses can now, as discussed in section 5.2.3, be supported by the Fund. As also stated in section 5.2.3, COFA has earlier strongly advised BNDES not to approve projects by private businesses. According to McNeish et al. (2010) and Accioly (pers. mess 2010), this block was questioned by different people as investments to the private sector could include development of technologies and patents that could benefit communities. However, the final agreement between COFA and BNDES that stated that the Fund will start to support the private sector, may demonstrate the balance of power within the Fund.

The disagreement of CTFA's responsibilities and their actual competencies show a potential weakness within the Fund. CTFA does not seem to be satisfied with their position within the Fund. They are interested in a change of responsibility within the Fund. Nobre (2011 pers. mess.) argues that BNDES have too few people in their team when dealing with these issues. BNDES should use the knowledge the technical committee is sitting on (Nobre 2011 pers. mess.). One may argue that the current position of CTFA may be a disadvantage of the governance system. The actors within CTFA are researchers coming from INPE, Imazon, the national environmental institute of the Amazon (IPAM), the national research institute of the Amazon (INPA), federal university of Pará and Petrobras research center at the federal



university of Rio de Janeiro. These institutes are likely to have deep knowledge about deforestation in the Amazon, in particular INPE, IPAM, Imazon and INPA. Using more of their knowledge on the forest and deforestation patterns could potentially have improved the overall achievement of the Brazilian REDD+ governance system. This argument seems to be underlined by Zadek et al. (2010:14) which states that the Fund “does not have a committee that thinks strategically about development in the Amazon, or about innovation. COFA is not really the place that this is happening; it does not have this strategic medium to long-term approach to the development of the Amazon”.

### **6.2.2 Transparency**

As described in section 5.4, there is a lack of transparency in BNDES regarding the application and evaluation process of projects. Several of the interviewees argued that they hope the Fund will influence BNDES to become more transparent. However, this should be related to this type of financing as BNDES is a bank that mostly gives loans and thus, in a loan context should be less transparent. According to Portal (2011), a fund that will deal with climate issues in general in Brazil, Fundo Clima was created in 2010, and an agreement between the Brazilian Ministry of Environment and BNDES was made. The Amazon Fund may in this way therefore influence BNDES to become more transparent when it starts to work with Fundo Clima.

### **6.2.3 Dual system of money flow**

Section 5.2.4 discusses briefly the dual system of money flow used in the national REDD+ governance system. The reason why the Brazilian government chose this dual system is that it is difficult to measure the reduction of emissions from each project and do not look at the complete picture. Azevedo (pers. mess. 2010) argues that focusing on REDD+ just among the different projects is “old school”. As stated in section 5.2.4, the Amazon Fund receives donations according to the national reduction of emissions from deforestation and not according to the results from the projects.

Looking at this dual system, projects may on one hand have an incentive to continue to reduce deforestation on a local level. Projects and programs may see their work as a contribution to the reduction of emissions from deforestation and may get an incentive to apply for the funds from the Amazon Fund. On the other hand, as stated in chapter 5.2.4, projects will not receive any money from the Fund if the national deforestation increases above the reference level. This may seem like a risk for at least smaller projects that would depend on the Amazon Fund in order to continue their project.

The federal policies should not receive any donations from the Fund. Hence, the Amazon Fund alone may not work as an incentive to reduce deforestation on the national level. Looking at the state politics however, the incentives of this dual system may function another way. There are already several state and municipality administrations that have been approved and they seemed to have seen the Fund as a chance to improve their policies on reduction of deforestation.

#### **6.2.4 Projects' relation to REDD+ and the evaluation process**

BNDES does not prioritize only REDD+ projects when they approve projects. This can be shown by the projects already approved. However, several projects will reduce emissions, even though the projects' main focus is not on REDD+. These projects may deal with PAs, or database land registration (CAR). TNC is a good example of this. Their Amazon Fund project has not a REDD+ focus. However, as the project will contribute to an increase in registrations in CAR, this might help to control the deforestation and thus, less emissions will be released. The project by IOV is, as shown in the analysis, not focused on REDD+. Their main concern is lack of water in the municipalities involved. The project works with degraded land and agroforestry. This is an interesting project from a REDD+ perspective. They work to recover degraded land and may therefore reduce emissions from these lands. This will however not be registered by the Amazon Fund as they do not measure the emissions avoided by degradation. Agroforestry is a type of reforestation, and as discussed in section 2.1, there is a disagreement whether reforestation projects should be included in REDD+ or not. One can argue that agroforestry will affect the biodiversity, a co-benefit criteria in REDD+, in a different manner than for example a forest plantation project. In addition, agroforestry has the potential to reduce poverty, the second co-benefit. Thus, the project by IOV may affect REDD+ even

without any REDD+ focus. As there is a broad spectrum of projects supported, one could argue that as the way the Fund is constructed, the emissions from deforestation may have a higher chance to be reduced on a biome basis.

Due to the procedures the projects must go through in order to apply and be approved by the Fund, projects may have difficulties to apply for the resources of the Fund. One thing is the high transaction costs for a project that may not even be approved. Participants from project must often go to Rio de Janeiro when they apply for the resources in order to explain the project. Thus, the costs and time it takes to go to Rio is also too high for some projects. The lack of transparency for being approved and difficult evaluation process also contribute to the difficulties for some smaller projects.

Is it the REDD+ governance system that decides the approval of the project or is it likely that the projects have been approved in other governance systems also, meaning that there are other forces that influence the decision-making of project approval? If one look at section 6.1.1, the first projects supported seemed to be more related to the wish to show results in COP meetings rather than the overall strategy. Also, as will be discussed in the next section, BNDES has up till now more or less followed their own routines when deciding which projects to support. These issues may demonstrate that it is likely that there are other forces than just the guidelines from COFA involved when deciding on which projects to approve.

Another question that also should be raised when the evaluation process now has been discussed is whether the projects approved by the Fund will manage to do something new, meaning that the projects would be additional to the activities that would anyway have taken place. The findings in section 5.4.2 only focused on additionality in relation to activities on the federal governmental level and it was found that on this level, additionality seems to be in focus. However, if all the different actors that until now are being supported are looked at, the additionality aspect may be different. As Leite (pers. mess. 2011) stated, ARPA could apply for resources other places, but they chose the Amazon Fund. As ARPA is a big program and has connections to other actors, like the World Bank, etc. applying for resources another place would be okay for them. This is likely for other big actors as well, like TNC, Imazon and FAS. However, this may be difficult for some smaller actors. IOV for instance already had started their project. In this way, this project is not additional. Nonetheless, this NGO might not have been able to do as much as they can now with the resources from the Fund. This may also be applicable to other smaller projects. State and municipality resources can be argued to

be additional. I do not know to what extent public administration can apply for resources from banks etc. to contribute to their budgets. However, if this is not possible, the resources from the Fund may contribute to additionality within the administration. These findings mean that the Fund does not seem to prioritize additionality when they approve projects.

### **6.2.5 Old habits are hard to change**

Sections 5.1.3 and 5.2.3 show that BNDES follows more or less their own structure regarding the evaluation process of the projects, meaning that they have not changed their methods for approving projects for the Fund in comparison with activities that receive loans from the bank. Informants have questioned this method. Activities that apply for loans and activities that apply for donations are different issues and should be handled thereafter.

The same tendencies can be seen by the approved projects, at least the ones that were interviewed for this thesis-. None of these projects were created because of the Fund. All of the actors continued with their own plans and they applied for the resources in order to fill financial gaps.

By creating the Amazon Fund new institutions have been and are being made. The discussions in this thesis may support the theory which states that institutional change can be a slow process and that it can create inertia because of the change of habits. BNDES follows many of their usual habits as a bank when they evaluate activities that can be supported by the Fund. As also the theory in section 3.3 argue, BNDES is likely to change their habits as the new/changed institutions will affect the behavior of BNDES and this again will create new habits. However, as new routines are difficult and complex to adapt to, it is likely to take time. Interviews for the thesis show that some actors within COFA and actors outside the Fund were not satisfied with the speed of the evaluation process in the initial period after the creation of the Fund. They argued that BNDES was approving too few projects and that the evaluation process took too long. This demonstrates however, that for BNDES to start to take on new habits make the whole process slow and thus creating inertia within the Fund. As shown in this thesis, BNDES has started to change some of their habits to fit the behavior that is needed to do evaluations on donation activities in contrast to loan activities. Examples of this can be the approval of small projects and that it has become slightly more transparent.

## **Chapter 7 Conclusion**

### **7.1 Summing up**

In this section I will sum up the main findings in the thesis by answering all the four research questions.

#### **7.1.1 Characteristics of the governance system**

The Brazilian REDD+ governance system, which as it is today, consists of three actors: the Amazon Fund, the federal government and project leaders, was introduced at COP 13 in 2007. The federal government had several options for financial mechanism to reduce deforestation and through this reduce emissions from deforestation. They chose a fund approach in contrast to a market-based approach as this would keep the sovereignty of the Amazon forest within Brazil. In addition to this, they wanted a national fund but at the same time not governed by the government. The process of decision-making in a fund administrated by the government would be very slow. Thus, they were interested in a public bank that would allow the funding to be available to all kinds of organizations in the society. The national REDD+ governance system is performance-based in that the Fund receives donations in accordance with already reduced deforestation.

The main actor in the REDD+ governance system is the Amazon Fund. The Fund consists of two committees and a manager of the Fund; COFA, BNDES and CTFA. COFA is the steering committee that steers the Fund in a certain direction by deciding on the guidelines and criteria for approval of activities. They do not have any authority. BNDES manages the Fund. They have all the authority; thus all decision-making is taken by them. CTFA is the technical committee and they only verify the deforestation and emission data the Fund get from INPE and SFB. Actors within both COFA and BNDES seem to think that it is correct that BNDES should have all the authority. However, as BNDES is a bank and is used to bank-secrecy, the organization lacks transparency. This makes it difficult for COFA to control whether BNDES follow the guidelines and criteria in the Fund. Informants have however not seen any projects that do not match with the criteria so far.

### 7.1.2 Strategies of the Fund

The strategy of the Fund is to reduce deforestation that includes sustainable development in the Amazon basin. This will be done by supporting different activities, like projects and programs by public and private actors and NGOs. Donations can be given by foreign governments. Preparations are also being done in order to receive money from multilateral institutions, NGOs, companies and individuals.

The Fund has seven thematic areas that are seen as the strategic directives of the Fund. All projects supported by the Fund must at least work with one of these thematic areas in order to become approved. These seven thematic areas are based on the strategies of two of the main national plans for reduction of deforestation; PPCDAM and PAS. Each state in the Legal Amazon can only have a vote in COFA if they follow a state plan for combating deforestation. This thesis argues that the strategies of the Fund are well integrated to the overall federal deforestation policy. This is mainly because the thematic areas are very wide and general. The criteria also seem to match the strategies of the Fund and PPCDAM.

Up till now, 14 sub-national activities are being supported by the Fund. This includes six state and municipality administrations, two public-private partnerships and six NGOs. Looking at the type of projects from a REDD+ governance system perspective, the Fund supports projects and sector policies. National programs have not been supported. There are specifically two types of activities that have caused conflicts within the Fund. This is related to small projects and projects by the private sector. The disagreement of small projects have been about whether and how to support small projects. Projects by the private sector have earlier been questioned by COFA as these projects might not benefit the public. However, the Fund has now come to the conclusion that private businesses can get support if their projects also benefit the communities.

The MRV system used in the Amazon Fund involves INPE, SFB and CTFA. INPE do both monitoring and reporting of deforestation. SFB calculates the avoided emissions from deforestation. Both INPE and SFB report their methodology used and calculations to CTFA, and ATFA do the verification of the data. The amount of donations received at the Fund will depend on the deforestation rate from the year before. If this rate goes above the reference level, all donations to the Fund will be stopped. Brazil has to add the extra amount of

deforestation rate to the next year's deforestation rate. Thus, an increase in deforestation will not only stop the donations, but the projects that are supported by the Fund will not receive any money even though they might have followed the contract. This creates a dual system of money flow in the Amazon Fund.

In order to control that the supported activities follow the objectives of the Fund, the Fund has a logical framework. In addition to this, BNDES will stop the money flow to the project if the project does not follow the contract. The project must also return all the money they have received.

### **7.1.3 Characteristics of the projects**

The third research question, which looked at the characteristics of the projects, was mainly based on four projects, as I did interviews with representatives from these projects. These include IOV, TNC, FAS and ARPA.

These projects had already started before the project leaders applied for the resources. All of them applied to the Fund in order to fill a financial gap. ARPA on the other hand, was the only project that seemed to choose the Amazon Fund because of the Fund's objectives. As the thematic areas of the Fund are quite broad, all projects seemed to fit these areas.

### **7.1.4 Amazon Fund and REDD+ governance system criteria**

On the one hand, the overall political legitimacy can be argued to be high. COFA is an important contribution to this. Informants also seem to be satisfied with the division of authority. However, lack of transparency can be argued to lower the overall political legitimacy. Looking at effectiveness, additionality on the federal level has been focused on in the Fund. The discussion showed however, that additionality of the activities has not been taken into consideration. Leakage control has only got a focus to a certain extent. Leakage control has also received focus in studies of the Fund. Inter-leakage control seems to be a bigger problem than leakage within the Amazon. Permanence has not received much attention.

Only 3 % of the donations should be spent on management costs. However, informants argue that BNDES is likely to have spent more than those 3 % on costs. The amount above 3 % will however been covered by BNDES itself.

Poverty alleviation has not received too much attention in the Fund. By starting to support small projects, poverty alleviation on a local level may occur. Biodiversity is a concern within the Fund.

## **7.2 Conclusion to the main research objective**

This section will answer the main research question and will therefore be the main conclusion of this thesis. Firstly, I will present the strengths of the governance system. Secondly, I will look at the weaknesses of the system.

### **7.2.1 Strengths**

An advantage with the Brazilian REDD+ governance system seems to be the political legitimacy. COFA, the division of authority and the balance of power seem to strengthen the political legitimacy. However, aspects like lack of transparency lower the overall political legitimacy in the Fund. Another advantage with the system is that it seems to be well integrated into the overall deforestation policy in Brazil; this includes both the strategies and the criteria of the Fund. The projects also seem to match the criteria and the thematic areas.

On an international level, the Fund's MRV system seems to be good. INPE's deforestation monitoring system has got good reputation. CTFA, as the actor that verifies the deforestation data, consists of scientists chosen by the government. However, as one of the members is from INPE, CTFA cannot be argued to be totally independent from INPE. On the other hand, this might not get any negative consequences.



## 7.2.2 Weaknesses

One disadvantage with the Brazilian REDD+ governance system is that it is only a small contribution to the overall national policy on deforestation. It has been argued in this thesis that the Fund does not seem to have a main focus on the critical drivers of deforestation when they approve projects. Another disadvantage about the Fund is that it does not take degradation into consideration regarding the measurement of emission reduction. If the Fund will continue to be the national REDD+ governance system, this should be included. It is shown that degradation is increasing in the Amazon. Including degradation into the Fund should be possible as INPE already has a monitoring program for that. Up to 20 % of the donations can be spent on monitoring activities outside the Amazon. However, not any project from outside the Amazon Fund has been approved yet. The problems of deforestation and high emissions from these activities in the Cerrado show a necessity for focusing more on other biomes.

Intra-biome leakage was not seen as a concern by informants. However, studies shows that very local leakage happens in the Amazon. There seems to be no focus on the very local leakage within the Amazon Fund at this point. But as the Fund support sub-national activities, there could be a possibility to create leakage belt around each project in order to try to control the very local leakage. New projects can also deal with the new pattern of deforestation, if intra-biome leakage control is taken into consideration.

The dual system of money flow in the Amazon Fund may also be a weakness. If deforestation increases, this system might affect the projects that have followed their contract in a way that the projects will be prevented from continue their operations as the international donations will stop at this point.

The Fund does not seem to take advantage enough of the knowledge of the people in CTFA. These researchers have good knowledge about deforestation issues within the Amazon, and usage of this knowledge could improve the results from the Fund.

The Fund does not seem to prioritize projects to be additional as many of the projects would have taken place anyway. Some projects will be additional. However, others mostly large actors may have applied for resources another place if the Amazon Fund did not exist.

The co-benefit poverty alleviation is by BNDES argued to be taken into consideration when approving projects. However, other informants argue that so far this has not happened. Poverty alleviation will be taken more into consideration when small projects become supported. BNDES now seem to begin to focus on partnerships that are associated with small projects.

Lastly, BNDES has been criticized for following the same routines for loans and for donation activities in the Fund. Projects have also followed their old routines and apply for support from the Fund due to financial gaps. BNDES has shown a few improvements towards the Fund but still uses many of their old habits. As shown with theory, this may be a natural process. As it takes time to change habits, especially with an experienced bank as BNDES who has never been in this position earlier, it may come to the time where BNDES may become better at these things as they need some time to change their habits in order to fit the new institutions.

To conclude, I would argue that the Fund has some good qualities. However, if the Fund will remain the Brazilian REDD+ governance system, there are several improvements that should be done. This thesis shows some of the weaknesses that might not be too difficult to change. However, there are other weaknesses that will be more difficult to change. Using BNDES as the administrator of the Fund has in some way made it a good system as BNDES is known to be little corrupt for example. However, as BNDES is a bank, it has also caused conflicts within the Fund, and maybe some of the weaknesses may have been different if the manager of the Fund would be a different actor.

#### **7.4 Limits to the research**

As the process of writing this thesis has been an interesting learning process, both on how to write a thesis and on the topic, I now see issues that could have been discussed during interviews in order to get more precise and better results. Some of the aspects in this thesis I

only fully understood towards the end of the process, and I see that I could have asked questions related to these aspects from another point of view.

More projects could have been interviewed in order to get a deeper knowledge of the different projects. However, application process of the projects was still in an early phase when I decided on which projects to approve. When more projects had been approved, I lacked time and possibility to do interviews with new approved projects. In-depth interviews with more than four projects could give better results and discussion on how drivers of deforestation are tackled on the ground. It could also have been easier to compare the different projects with the criteria of the Fund in order to see how well the projects actually fit the overall strategy of the Fund. More interviews could also have been done in the state administrations that take part of COFA. As I have no informants from that block of COFA, I lack that side of the discussion.

I have also learned that I should have interviewed more people that are not taking part of the committees of the Fund or BNDES in order to get better results on topics like political legitimacy for example.

## **7.5 Implications of the future**

Further research should be done in order to find solutions to improve the Fund as a REDD+ governance system. This should include both the issues I have highlighted in this thesis to be affordable and easier to change and also the more time consuming and difficult changes.

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## Appendices

### Appendix 1 Interview guides

Interview guide, Adriana Ramos

1. What do you think about working in COFA?
2. What type of activities will the Fund support?
3. Why did the Fund decide to follow the strategies of PPCDAM?
4. Do you think this solution works?
5. What type of control mechanism will the Fund use for the projects to follow the contracts?
6. What do you think about the distribution of responsibility and authority in the Fund?
7. In what areas do COFA have authority?
8. How is the cooperation between COFA and BNDES?
9. How do they treat common problems?
10. How is the cooperation between CTFA and COFA?
11. How is the cooperation between CTFA and BNDES?
12. What do you think about the distribution of information regarding the evaluation process and approval of projects within the Fund?
13. What is the plan to maintain the sustainability of donations to the Fund?
14. Do you see any problems about the Fund's ability to control leakage, permanence and additionality?
15. What is your opinion about the Fund's ability to reduce poverty and include indigenous people?
16. How is corruption controlled?

Interview guide, Alberto Lourenço

1. What do you think about working in COFA?
2. Why did you decide to follow the strategies of PPCDAM and PAS?
3. Do you think this solution function?
4. What do you think about the distribution of the responsibility and authority in the Fund?
5. How is the cooperation between COFA and BNDES? And how do they treat common problems?
6. How is the cooperation between CTFA and COFA?
7. How do you think the distribution of information regarding the evaluation process and approval of projects is within the Fund?
8. What is the plan to maintain the sustainability of donations to the Fund?
9. Do you see any problems with the ability of the Fund's control of leakage, permanence and additionality?

10. What is your opinion about the ability of the Fund to reduce poverty?

#### Interview guide, Alexandre Olival

1. Why did you decide on an agroforestry project?
2. Why did you decide to apply for the resources?
3. By which criteria were you chosen by the Fund?
4. Why did you decide to regenerate the degraded areas?
5. What were the conditions to the project by BNDES?
6. What are the strategies to follow the main objective?
7. How is the project following the strategies of the Fund?
8. What is the plan to measure the emission reduction from this project?
9. What is the plan to measure the development of biodiversity and reduction of poverty?
10. What happens if you do not manage to deliver what was said in the contract?
11. How many species do you use in the project?
12. Will you use local species or is also new species introduced?
13. Is there any challenge in relation to the relationship with the Fund?

#### Interview guide, Carlos Nobre

1. What do you think about the work in CTFA?
2. What do you think about the distribution of responsibility and authority in the Fund?
3. What do you think about CTFA's responsibilities within the Fund?
4. How is the cooperation between CTFA and BNDES?
5. How is the cooperation between CTFA and COFA?
6. On one of the first reunions of CTFA, it was discussed to include degradation into the Fund's MRV system. What is the position on this today?
7. Do you see any problems in the ability to control leakage, additionality and permanence?
8. How exact is the measurement of deforestation by PRODES?

#### Interview guide, Christiane Ehringhaus

1. How is the relationship between GTZ and the Fund?
2. Will Germany donate to the Fund?
3. What is your opinion about the distribution of responsibility and authority in the Fund?
4. Do you see any conflicts in relation to this?
5. What do you think about the cooperation between COFA and BNDES, and BNDES and CTFA?
6. Do you think there is any conflict of interest between any of these three actors?

7. What is your opinion about the Fund's ability to reduce poverty and enhance biodiversity?

#### Interview guide, Fábio Leite

1. Why was Funbio chosen to be the financial manager of ARPA?
2. When was the second phase of ARPA planned?
3. Why did you apply for the resources?
4. Why did you decide to make a program this type of program?
5. By which criteria were ARPA chosen by BNDES?
6. What were the conditions for the project by BNDES?
7. What are the strategies to monitor the main objective?
8. Who decided the plans for all the three phases of ARPA?
9. Which criteria are used when you choose the protected areas?
10. Which areas in the Amazon do ARPA prioritize?
11. What is the plan to measure the reduction of emission from this program?
12. How do you control that things go as planned?
13. What will happen if the program does not manage to follow the contract with the Fund?
14. Is there any challenge in relation to the relationship with the Fund?

#### Interview guide, Gabriel Ribenboim

1. Why did you decide to apply for the resources from the Fund?
2. Why did you decide to do a project like this that is focused on reducing emissions from deforestation?
3. How is the donations given to the families?
4. What were the conditions to the project from BNDES?
5. What are the strategies to control the main objective?
6. Why did you choose only the two components of income and association to be supported by the Fund?
7. By what criteria do you choose the protected areas in the program?
8. What is the plan to measure the reduction of emissions in this program?
9. What is the plan to measure the development of quality of life of the families involved?
10. How will you control that every family follows the contract?
11. What will happen if they do not follow the contract?
12. Is there any challenge in relation to the relationship with the Fund?

#### Interview guide, Guilherme Accioly

1. What do you think about working with an organization like the Fund?
2. What has been the biggest challenge for the bank in the Fund?
3. What are the most important criteria when you approve a project?
4. In your opinion, what are the main criteria for reducing deforestation?
5. Have you already approved projects outside the Amazon biome? If not, why not?
6. What is your opinion about using intermediates for small projects?
7. What do you think about the distribution of responsibility and authority in the Fund?
8. How is the cooperation between BNDES and COFA?
9. How is the cooperation between CTFA and BNDES?
10. The administration costs should not exceed 3 %. But I have heard that you have spent more than this. Can you explain this more deeply?
11. How is the Fund going to control leakage, permanence and additionality?
12. What is your opinion about the Fund's ability to reduce poverty and biodiversity?
13. Is carbon emission important when you approve a project?
14. How is corruption controlled?
15. To what degree you think the Fund can influence BNDES?
- 16.

#### Interview guide, Gustavo Pinheiro

1. Why did you choose to do a project on control of deforestation?
2. What is the main objective of the project?
3. What are the strategies to monitor the main objective?
4. Why did you decide to apply for the resources?
5. By which criteria were you chosen by the Fund?
6. Which criteria are used to choose the municipalities for the project?
7. What types of incentives are given to the producers of cattle, soybean and timber for them to be included in CAR?
8. Will this project include all the producers in the municipalities?
9. Will the landless people become affected by this project? In what ways?
10. How is the project following the strategies of the Fund?
11. How is the Fund following the development of the project?
12. What is the plan to measure the reduction of emissions from this project?
13. What is the plan to measure the development of reduction in poverty?
14. What happens if you do not manage to keep the contract with BNDES?
15. How do you control that all the municipalities do as they are planned to?
16. Is there any challenge in relation to the relationship with the Fund?

#### Interview guide, Inge Nordang

1. What do you work with in relation to REDD+ and the Amazon Fund?
2. How long have you been working with this?

3. Do you know the reason why the Fund is considered private?
4. What do you think are the biggest challenges in the Fund regarding the division of competency?
5. How does BNDES relate to transparency?
6. What do you think about the critique of BNDES being slow to approve projects?
7. Do you have any suggestions for new literature?
8. Do you have any suggestions for people I can come in contact with?

#### Interview guide, Márcio Santilli

1. How is the relationship between the Fund and REDD+?
2. To what degree the Fund can be a governance system of REDD+?
3. To what degree do you think carbon sequestration and reduction of emissions from deforestation and degradation is central objects in the Fund?
4. What is your opinion to about the Fund's ability to reduce poverty and biodiversity?
5. What plans does the government have for a future REDD+ mechanism in the country?
6. Do you think the Fund will be part of this new mechanism?

#### Interview guide, Marco Conde

1. How can the Fund contribute to change the most important drivers of deforestation in the country?
2. To what degree do you think reduction of deforestation and biodiversity is important factors to the Fund?
3. How can the Fund control leakage, additionality and permanence?
4. What do you think about the distribution of responsibility and authority in the Fund?
5. Do you see any conflicts regarding this?
6. What do you think about the distribution of information about the evaluation process?
7. What is your opinion about the Fund's ability to reduce poverty and include indigenous people?

#### Interview guide, Peter May

1. To what degree do you think that the Fund can be a REDD+ governance system?
2. Is there any inconsistency between the originated plan to create the Fund and the existing fund in relation to REDD+?
3. How central is carbon sequestration and reduction of emissions from deforestation and degradation in the Fund?
4. Do you see any problems in the Fund's ability to control effectiveness?
5. What is your opinion about the Fund's ability to reduce poverty and enhance biodiversity?

6. What is your opinion about the distribution of the competencies in the Fund?
7. In what ways do COFA have autonomy in the Fund?

Interview guide, Tasso Azevedo

1. How did you become interested in designing the Fund?
2. How did you design the Fund?
3. Did other alternatives come up?
4. Why did you choose BNDES as the bank?
5. Is there any inconsistency between the originated plan to create the Fund and the existing fund in relation to REDD+?
6. To what degree do you think that the Fund can be a REDD+ governance system in the new national REDD+ agenda?
7. It is written that the Fund is a private fund. But from the interviews I have got the impression that it is more a sub-fun of BNDES. Do you think you can say something about this?
8. Do you see any conflicts because of the distribution of responsibility in the Fund?
9. In what way do COFA has autonomy in the Fund?

## Appendix 2 All the criteria for the Fund set by COFA

Source: MMA (2008b)

### Minimum criteria for the projects

Cod.	Criterion	Amazon Biome	Other Biomes	Other Countries
C1	Result Indicators	Projects must include measurable result indicators directly related to the objectives of the Amazon Fund.	Projects must include measurable result indicators directly related to the monitoring system of deforestation or forestry degradation implementation.	Projects must include measurable result indicators directly related to the monitoring system of deforestation or forestry degradation implementation.
C2	Proponents / Executing Agency	Projects must include the approval of all the proponents and executing agencies in their presentation.	Same as the Amazon Biome	Same as the Amazon biome.  Additionally must have the participation and/or approval of the central government of the beneficiary country.
C3	Social Participation	Projects involving traditional communities and indigenous people must present a document that corroborate the previous consent of those communities or of their representative institutions	Project must have a monitoring instance with the necessary participation of governmental entities and the civil society	Project must have a monitoring instance with the necessary participation of governmental entities and the civil society
C4	Accordance with the Thematic Lines of the Amazon Fund	Projects must be fitted in at least one thematic line of the Decree 6.527/2008 <sup>21</sup>	Not Applicable	Not Applicable
C5	Coherency with the Federal Plan and the	Projects must demonstrate clear coherency with the foreseen actions of	Not Applicable	Not Applicable

<sup>21</sup>

*See the introduction of this document.*

	State Plans of Prevention and Deforestation Combat	the PPCDAm and of the State Plans of Prevention and Deforestation Combat.		
C6	Coherency with the PAS	Projects must demonstrate clear coherency with the directives of the PAS - Plano Amazônia Sustentável (Sustainable Amazon Plan).	Not Applicable	Not Applicable
C7	Contribution to REDD <sup>22</sup>	Projects must contribute direct or indirectly to take to REDD.	Same as the Amazon Biome	Same as the Amazon Biome
C8	Resource Increasing	Projects must respect the principle of additionality to the public budget assigned to spent in areas of the Amazon Fund.	Same as the Amazon Biome	Not Applicable
C9	Co financing	Must present a co financing and/or non monetary contribution, demonstrating increasing to the resources taken up by the Amazon Fund and bringing forth a multiplier effect to the investments of the Fund.	Same as the Amazon Biome	Same as the Amazon Biome
C10	Territorial Base	Projects must inform their territorial base (which State and, if applicable, which municipality).	Projects must necessarily tackle the forestry monitoring of at least one biome in total.	Projects must necessarily tackle the forestry monitoring in a national level.
C11	Publicity and Transparency	Projects must have a mechanism of publicizing their information on the Internet.	The monitoring system supported by the Amazon Fund must be formed by platforms which allow wide publicizing, transparency and access, by the Internet, to the shown up data.	The monitoring system supported by the Amazon Fund must be formed by platforms which allow wide publicizing, transparency and access, by the Internet, to the shown up data.
C12	Sustainability of the Project	Present strategies of sustainability of the project results after its implementation.	Demonstration of economic sustainability after their implementation.	Demonstration of economic sustainability after their implementation.

Observations:



- C2 - Proponents must necessarily be national institutions from the tropical countries, in accordance with the concerning national laws.
- C3 - Projects which involve the development of monitoring systems must have a monitoring instance with the necessary participation of governmental and civil society entities.
- C3 – The involved communities must be appointed in the project.
- C3 – Projects related to the attributions of public entities or to the establishment of public policies do not need the acquiescence of the beneficiary.
- C5 – In the absence of the State Plan of Prevention and Deforestation Combat, the criterion is not applicable.
- C9 – In the application of the Criterion C9, the following aspects may be considered:
  - Medium budget accomplished in the last 2 years in the public budget invested on the proposed action;
  - Resource curtailment grade in the public budget for the action accomplishment;
  - Foreseen in the several-year plans of the governments (PPAs).
- C9 – The co financing may be through monetary resources directly invested in the projects or by the offering of infrastructure, personnel and other indirect forms, protected the foreseen condition in the C9.
- C11 – The BNDES will become available a standardized tool for integration and to give updated information access of all projects.

### Modalities of project resources

Cod.	Modality	Amazon Biome	Other Biomes	Other Countries
M1	Direct Applications - Investment	Made directly by the executing agency of the project, including the hiring of third members  Includes investments in constructions, equipments, training and professional development to enhance initiative capacities.	Same as the Amazon Biome	Same as the Amazon Biome
M2	Direct Applications - Defrayal	Made directly by the performers of the project, including the hiring of third members  Includes expenses with field travel/missions, consultancies by natural or legal persons, field materials, communications, and others.	Same as the Amazon Biome	Same as the Amazon Biome
M3	Payment for Environmental Services	Payments for the environmental services suppliers.	Not applicable	Not applicable
M4	Long Term Continued Services	Long term services to obtain long term results such as monitoring deforestation or forestry degradation, forestry inventory and others.	Not applicable	Not applicable

Observations:

- M4 – The projects of the continued services can take 10 years and must have a mechanism of continuous monitoring of its implementation and public broadcasting of its results.
- M1 a M4 – The projects may involve more than one category

## Restrictions of resource usage

Cod.	Criteria	Amazon Biome	Other Biomes	Other Countries
R1	Daily Wages	Civil servants cannot receive daily wages (except to research activities involving public research institutions).	Same as the Amazon Biome	Same as the Amazon Biome
R2	Natural Persons Payments	Civil servants in regime of exclusive dedication cannot receive salaries or any type of wages (this restriction is not applicable to scholarships or researches specifically related to the project).	Same as the Amazon Biome	Same as the Amazon Biome
R3	Taxes	The resources cannot be applied to tax deductions which are not inherent and/or related to the defrayal or to the investments made by the project (this restriction is not applicable to taxes related to the project activities, as the ICMS <sup>23</sup> added to the prices of goods; INSS <sup>24</sup> ).	Same as the Amazon Biome	Same as the Amazon Biome

## Equity criteria of resource application

Cod.	Criterion	Amazon Biome	Other Biomes	Other Countries
E1	Equity in the application of the State resources	To avoid the concentration of the project resources in specific States.	To avoid the concentration of the project resources in the same biome.	To avoid the concentration of the project resources in the same Country.
E2	Equity by nature of proponent	To avoid the concentration of resources among the types of proponents: public entities, research institutions and civil society organizations.	Not applicable	Not applicable
E3	Lines of Application BNDES	Not less than 50% of the resources shall be allocated in projects which comprises: (a) sustainable productive activities and (d) scientific and technological development.	Not applicable	Not applicable

Observations:

- E1 – There is an option of non setting specific indicators of resource concentration in exclusive projects of a State during the first year of the Amazon Fund operation.

<sup>23</sup> Added Value Tax

<sup>24</sup> Labor Tax

- E2 – In the Amazon Fund context, it is included in the Civil Society the Non Governmental Organizations, labor representatives, business representatives and other private institutions.