2010

Climate Compensation Programs in Costa Rica and the Netherlands

WAGENINGEN UNIVERSITY

WAGENINGEN UR

M.H.W. Bens 800621049020

Department of Environmental Sciences

Socio Spatial Analysis

SAL-80433

Prof. dr. V.R. van der Duim

Dr. ir. B.H.M. Elands

June 2010

Abstract

Ways to mitigate climate change are currently evolving rapidly. Climate compensation is one of these ways and compensation programs spring up in the relatively new market of carbon credits. In this study six climate compensation programs in Costa Rica and the Netherlands have been analysed and compared with the use of the policy arrangement approach. It aimed to get an insight in the internal dynamics of climate compensation programs in Costa Rica and the Netherlands, and to link the discourses within the current debates on climate compensation. In Costa Rica the governmental influence appeared to be very strong, whereas in the Netherlands hardly any governmental interference was found. In Costa Rica a strong discourse was identified on carbon neutrality, whereas in the Netherlands the climate neutrality discourse forms the dominant discourse. Also sustainable development is interpreted different by both countries, with Costa Rica prioritizing economic sustainability above ecologic sustainability which appears to be mutually exclusive, and the Netherlands aiming all sustainable development aspects to be mutually enforcing.

Table of Contents

Tables and Figures

Preface

After having searched for many years what I could do to make a contribution to the wellbeing of our planet, the last five years have provided me with some answers on how to do so. Within the studies I followed I always made sure that sustainability was embedded in my personal assignments. When searching for a topic for my graduation project to finish this Master program it the main line of research was easily found. The question however remained on how to specify it and to find a clear focus in the broad topic of sustainability. My first thesis supervisor, René van der Duim, has helped me to find this focus. When the research started the focus was to find the relation between nature conservation policies and tourism in Costa Rica. A climate compensation program that distributes compensation money to local farmers who want to conserve their forest[*] land or want to convert their agricultural land into forest was found and formed the basis for the research. During the research information was found that forced me to take another direction and consequently a comparative analysis between several compensation programs came into place. René and Birgit Elands (my second thesis supervisor) have always supported me when I had to make some difficult decisions, and gave me good advises to find the right direction. For this I am very grateful and I would like to thank them for this support and the clear insights they have given me. Furthermore I wouldn't have been able to finish this thesis without the support of my boyfriend, who always listened to me, and gave me an extra push to handle difficult situations. Of course this research could not have taken place without the help of the respondents and people whom I interviewed and who have provided me with valuable information. These people are: Jürgen Stein; Allen Cordero; Guillermo Canessa; Pedro León; Alberto García; Laura Lang; Jackeline López; Patricia Forero; Patricia Duar; César Solís; Janjoris van Diepen; Sjaak de Ligt; Vitas Kersbergen and Jaap van den Berg. Doing research in Costa Rica was not always easy and two people have really helped me there to enjoy myself and to let go of the stress I experienced while I was there. These two people are Anniek de Jong and Rosie de Haan, girls thanks for cheering me up and taking me out! Lastly I also want to thank my friends and parents who never complained about the fact that I was often too busy to see them and always supported me in what I am doing.

Summary

This study has analyzed and compared six climate compensation programs in Costa Rica and the Netherlands with use of the policy arrangement approach. In doing so four dimensions have formed the basis for research. These dimensions are the actors and coalitions; resources and power over these resources; the rules of the game; and lastly the discourses that are present in the policy arrangement. The research has been conducted with the objective To develop an insight in the internal dynamics of tourism related climate compensation programs in Costa Rica and the Netherlands, and the discourses within the current debates around climate compensation that are reflected in the programs, in order to unfold differences and similarities between the two countries. Within each of the countries three climate compensation programs were investigated. The Costa Rican government has set up two of the three compensation programs, which are Living Forest and Clean Trip (Viaje Limpio in Spanish, also known as Clean Travel). A third initiative has been set up by the private sector. This is Green Your Trip, but since its recent change of name is better known as Alliados Cambio Climático (ACC). In the Netherlands Green Seat, Trees for Travel and CO2ZERO were subject to research. The first two programs do not only compensate carbon emissions but also other emissions (CO_2-equivalents) generated by aircrafts that are extra damaging when generated in the higher atmosphere. All the Dutch programs are private programs, with Trees for Travel being a charity foundation.

The study has found some major differences between the climate compensation programs in both countries, which were mainly based on governmental involvement in the programs. In all the dimensions a strong influence of the government was found in the Costa Rican programs, where in the only private initiative the government was still present as a major actor through a state university. In relation to the typologies it was concluded that although there are some sidesteps to neo-corporatism, etatism is the most present typology in Costa Rica. In the Dutch programs the government is hardly involved. The only signs of governmental involvement are the acknowledgement of Trees for Travel as a charity foundation, and the subsidies that have consequently been assigned to Trees for Travel. Furthermore it was found that in the Netherlands intermediaries are generally used to address the target group, whereas in Costa intermediaries are not generally used.

The financial resources in Costa Rica often come from external organizations, while in the Netherlands only one program has received financial support through a subsidy. The Costa Rican programs only support forest projects, which strongly reflects a forests for climate compensation discourse. In the Netherlands, however, it are mainly energy projects that are supported by the programs, with only one program still having forest projects in their portfolio. The distinction between these two types of projects is also found in the global debates about sequestration and compensation, and even seems to be what the whole debate is about.

The rules of the game in Costa Rica appeared to be very opaque in contrast to the Dutch programs which are much more transparent. In relation to the discourses it was found that both countries support the sustainable development discourse, but in Costa Rica economic- and ecological sustainability seems to be mutually exclusive. This could be explained by the fact that Costa Rica is still a developing country which still has to solve poverty issues and build a stronger economy. A last very important difference that was found are the discourses on which types of emissions should be compensated. In Costa Rica there is a strong carbon neutral discourse, with in the Netherlands a clear preference for the climate neutral discourse. This can also be linked to global debates on climate mitigation where carbon is used as a general concept to both CO_2 and CO_2-equivalents.

1   Introduction

The world is changing, and so is the climate that surrounds us. People talk about global warming, and devastating predictions are given by scientists. Climate change[*1] is currently a highly contested issue and around this issue roughly three debates can be distinguished. The first debate believes that climate change is caused by human activities, and is thus anthropogenic. As such climate mitigation[*] is seen as important in order to protect the earth and its population against the negative impacts of climate change. The second debate is based on the belief that climate change is based on natural processes and that there is no need to act to mitigate the change. The third debate claims that the changes in our current climate are the evidence of the beginning of a new era of unstable climates, as it has been for millions of years before the eras of human civilization, which have only started about 10.000 years ago, and which have been relatively stable (Sudhakara Reddy & Assenza, 2009).

Within these debates there are different coalitions of believers which are identified by Sudhakara Reddy and Assenza (2009) as supporters, sceptics, and realists. The supporters believe in the theory that climate change is anthropogenic and that action should be taken without any delays. The sceptics do not believe in climate change as human induced, and suggest to take no action at all to the changing climate. The realists do believe in climate change and its negative impacts, but do not support the solutions that are currently developed to mitigate climate change. According to this group the only way to tackle the negative impacts of climate change is to let sustainable development[*] go hand in hand with poverty reduction and equity, and as such minimizing environmental impacts.

In dealing with the negative impacts of climate change three types of policy responses can be distinguished:

1. Focused intervention to minimize the negative impacts on the environment → preferred by supporters
2. Adaptation → preferred by sceptics (economists)
3. Prevention → preferred by supporters (environmentalists) (Sudhakara Reddy & Assenza, 2009).

In the next paragraph a short description of the most important policies on climate change is given, after which the role of tourism in climate change will be discussed.

1.1 Climate Change Policy

In 1988, United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) established the Intergovernmental Panel on Climate Change (IPCC). The First Assessment Report of IPCC played an important role in the development of the United Nations Framework Convention on Climate Change (UNFCCC)[*]. This framework is set of non-legally binding agreements on the '(…) stabilization of greenhouse gas concentrations in the atmosphere[*] at a level that would prevent dangerous anthropogenic interference with the climate system' (Sudhakara Reddy & Assenza, 2009, p. 2998). In 1997, the Kyoto Protocol[*] was adopted in which the agreement to reduce greenhouse gas[*] emissions with 5% below 1990 levels, became compulsory for Annex I countries[*]. In 2012, the agreed goals should be complied and followed up by new agreements which were discussed at the Conference of the Parties in Copenhagen. This meeting in Copenhagen should have led to new agreements but no consensus could been reached, which resulted in twelve non-binding agreements (UNFCCC, 2009).

---

[1] All items with an asterisk: see glossary at the end of the report

The types of action that are proposed by the supporters can be categorized in three categories:

- Command and control mechanisms;
- Economic instruments;
- Fundamental transformation of society (Jacoby et al., 1998 cited in Sudhakara Reddy & Assenza, 2009).

Command and control mechanisms are based on regulation and as such define standards and limits to the production of greenhouse gas emissions and are thus compulsory to the people or organizations that are under the regulation. An example of this is the Kyoto Protocol which will be explained later in this chapter. Economic instruments are based on financial measures that are taken to obtain financial resources in order to tackle climate change. In this line one can think of climate compensation programs, or levying carbon taxes. The last category of action calls for the need for fundamental change in for instance economic structures, media and education. The public should be better informed about what is actually happening in relation to climate change and as such become more educated about the topic. This could enable a fundamental transformation on how people perceive the problem and what to do in order to overcome the problem of anthropogenic warming. Within the context of the topic of this report, being climate compensation programs, it can be concluded that the category of economic instruments with its market based mechanisms is the most relevant category to be further explained.

According to climate realists economic development should be combined with climate change mitigation and as such sustainable development could provide the basis for the future. Sustainable development as a basis for climate mitigation should be able to provide no-regrets (or win-win) outcomes. Sudhakara Reddy and Assenza (2009) distinguish two types of win-win outcomes: the economic- and financial win-win outcomes. The economic win-win situation '(…) is achieved when a problem is mitigated at a negative net economic cost, thus leading to a win for problem solving and a win for the economy.' (Sudhakara Reddy & Assenza, 2009, p. 3004). The financial win-win outcome '(…) is achieved when a problem is mitigated at a profit (negative net financial cost), thus leading to a win for problem solving and a win for the particular investor, company, or industry.' (Sudhakara Reddy & Assenza, 2009, p. 3004). In order to accomplish these win-win situations Sudhakara Reddy and Assenza (2009) propose to all developing countries to address climate mitigation through the lens of economic and social development. In other words, human development should stand at the basis for climate mitigation policies in developing countries.

Carbon offsetting* is a market based mechanism to contribute to climate mitigation and within the stream of carbon offsetting two markets can be distinguished. The Kyoto Protocol and its Clean Development Mechanism (CDM*) are part of the compliance market in which developed countries (Annex I) can purchase carbon credits from developing countries (Non-Annex I*) in order to be able to comply their reduction targets. Furthermore there is the voluntary carbon market in which climate compensation programs offer carbon offsets to organizations and individuals. The carbon credits that are sold on the compliance market are Certified Emission Reductions (CER's*) and the voluntary carbon credits are also known as Verified Emission Reductions (VER's*). Within the voluntary carbon market no international and widely recognized regulations or standards are set and as such this market is rather fuzzy and opaque. This, however, does not mean that there are no standards at all. The market itself is starting to organize its practices and quality standards are being developed through alliances between carbon offset organizations such as the international alliance ICROA and the Dutch alliance Klimaatneutraal.nl. The voluntary carbon market is especially relevant for this

investigation due to the fact that it are voluntary climate compensation programs that are investigated here.

In 1991 the Global Environment Facility (GEF) was established as a global affiliation between 178 countries in which international institutions, NGO's and the private sector are involved. Grants are provided for projects that address global environmental issues whereas national sustainable development initiatives are supported as well (Global Environment Facility, 2007). GEF is the financial mechanism for both the UNFCCC and Convention on Biological Diversity (CBD), which provides grants for the Payment for Environmental Services (PES) program in Costa Rica (PSA, Spanish abbreviation for *Pagos por Servicios Ambientales*). These grants, and other donations, however are not sufficient for the challenge of obtaining an adequate amount of financial resources for forest and biodiversity conservation. Therefore market-based mechanisms such as the trade in carbon certificates for CO_2 emission sequestration are adopted. PES is one of the programs that makes use of the above mentioned CDM, which is the most applicable mechanism of the Kyoto Protocol for developing countries (Odera & Kimani, 2004). It was initiated to encourage local farmers/landowners to convert agricultural or abandoned land to forest plantations or to protect existing forest land on their parcels and therefore decrease deforestation. This means that it is a voluntary based market instrument that allows the landowners to be financially compensated for the environmental services their lands provide. These environmental services are defined by Rodríguez Zúñiga as "those services provided by forest and forest plantations to protect and improve the environment" (2003, p. 31).

Costa Rica is often mentioned in literature as an example for other countries in how PES should be applied and functioning, and as such a further insight will be given in this country's approach of PES. In Costa Rica, PES was established in 1997 by FONAFIFO with its own management structure and governing board. It is executed under MINAET's[*] policies and SINAC[*] is responsible for overseeing the project activities. FONAFIFO itself is in charge of the financial matters (Rodríguez Zúñiga, 2003). Zellmer found that, despite a close relation between landscape and biodiversity with tourism, the link between this sector and PES is still limited (Zellmer, still in progress). There are currently four different services included in the Costa Rican PES system. These services are (1) greenhouse gas mitigation; (2) hydrological services; (3) scenic value; and (4) biodiversity (Biénabe & Hearne, 2006; Pagiola, 2008; Rodríguez, Toruño, Sáenz, Hernández, & Amighetti, 2005; Rodríguez Zúñiga, 2003; Sánchez-Azofeifa, Pfaff, Robalino, & Boomhower, 2007; Sierra & Russman, 2006; Wunder, 2005). The service of landscape beauty is generally seen as an opportunity to relate PES to tourism and consequently relates to biodiversity conservation, since recreation and tourism heavily depend on the landscape beauty, and therefore on biodiversity. This combination can be used for financial support through for example entrance fees on places with a high biodiversity and/or landscape beauty. This, however is not the only way of linking tourism to PES as, for example Pagiola (2008) recognizes the possibility of combining biodiversity conservation with carbon sequestration[*], which is also reflected in the acknowledgement of carbon sequestration as one of the environmental services in PES. The next paragraph will elaborate more on the relation between tourism and climate change and climate change mitigation.

1.2 Tourism and Climate Change

Tourism is one of the world's fastest growing industries and it is predicted that, despite a current downfall, the growth rates remain high over the mid-term and long-term range (Cole & Razak, 2009; Miller, 2008; UNWTO, n.d.). CO_2 emissions due to air travel "are expected to double in the coming decades" (Eyers et al., 2004 as cited in Boon, Schroten, & Kampman, 2007, p. 77), of which in 2000 50-65% were tourist flights (Peeters & Dings, 2003 as cited in Boon, et al., 2007), with an

increase expected to 55-75% by 2020 (Boon, et al., 2007). Due to its massive growth (potential) and the dual relationship of tourism with the visited destination, issues such as sustainability are inevitable to come up and the tourism sector is increasingly aware of the importance of their role in environmental problems and sustainability issues such as climate change (Gössling, 2002 as cited in Becken, 2004; Gössling, et al., 2007; Strasdas, 2007). Urged by politicians, the financial market, and non-governmental organizations[*] (NGO's) the industry is taking initiatives to green their sector (Bohdanowicz & Zientara, 2008; Dodds & Joppe, 2005), and combine their forces with NGO's such as the World Wildlife Fund (WWF), the Rainforest Alliance, IUCN, etc.

As noted above the relation between tourism and the climate can be described as dual. On the one hand tourism is contributing to climate change through increased connectivity of many different destinations all over the world. In other words, tourists increasingly fly long distances for their holidays and thus, tourism is heavily and increasingly dependent on air travel. Air transport is currently not included in the Kyoto Protocol and not accounted for in national greenhouse gas inventories, which consequently gives opportunities to the voluntary market (Gössling, et al., 2007; Strasdas, 2007). In relation to the lack of regulation for aviation it is estimated that flight emissions will have tripled by 2050 if nothing will be done to reduce these flight emissions (Strasdas, 2007). On the other hand, tourism simultaneously depends heavily on the wellbeing of the visited destinations. These destinations are more often situated in tropical countries, of which it has been found that these are most vulnerable to the negative impacts of climate change (Gössling, et al., 2007; Mendelsohn, Dinar, & Williams, 2006; Strasdas, 2007). Since many tourism destinations in the developing world rely on tourism as their major economic driving force, these negative impacts will not only influence the local living environment and biodiversity, but also have detrimental consequences for the local economy of the affected areas.

As Strasdas (2007) noted, several authors have identified a combination of tourism related solutions to climate change such as technological solutions, improved efficiency of aerial traffic management, modal shift in means of transportation, change of travel patterns, regulatory instruments and voluntary compensation of emissions (also called offsetting). There are currently many climate compensation programs popping up in this relatively new market of climate offsetting with a growth from six to approximately 170 compensation schemes between 1999 and 2008 (ENDS, 2008 as cited in Eijgelaar, 2009). Furthermore it was found that these programs are all based in industrialized countries (Eijgelaar, 2009; Gössling, et al., 2007). Climate compensation programs offer travelers the chance to offset the greenhouse gas emissions that are emitted with their tourism related activities such as flying, which –with a 3,4% contribution of all CO_2 emissions– is the most polluting activity within a tourism package (Gössling, et al., 2007; Strasdas, 2007). Even within sustainable tourism packages such as ecotourism, not much attention has been given to the polluting flight emissions that are caused on the often long-haul trips. The current rise of climate compensation programs in the western world, has encouraged a new discussion on sustainable long-haul tourism and is seen as an opportunity to book further progress in the sustainability of tourism, but instead of seeing it as a universal remedy it should be perceived as a complementary tool.

Compensation programs distinguish two project categories which are biological sinks and emission saving. The biological sinks are sequestration projects where forests and soil are used as storage rooms for carbon emissions, whereas the emission saving projects focus on avoided emissions through energy efficiency and renewable energy projects (Gössling, et al., 2007). The compensation money is often invested projects in the tropical developing countries that are visited by the tourists, and as such the participating tourist does not only offset his/her greenhouse gas

emissions, but also supports local projects in developing countries. This leads us to the controversial side of trees for sequestration, where tourists seem to prefer tree planting due to the scenic conditions that are provided by forests. In Gössling's et al. (2007) research it was found that less than 25% of the researched compensation programs included only energy projects in their portfolio, which clearly reflects the public's preference for bio sinks. Planting trees, however, takes much land from the tropical countries in which they are planted, and in order to keep the CO_2 stored these lands are taken for an infinite period. Furthermore the effectiveness of sequestration is questionable due to the vulnerability of forests to climate change (Ceron & Dubois, 2007 as cited in Gössling, et al., 2007).

According to Strasdas (2007) there are three categories of offset organizations operational in the market of climate offsetting. There are 1) offset projects that can focus on either or both energy and forestry. These projects realize the actual sequestration and/or avoided emissions and issue the carbon credits which are sold on the market. Secondly he distinguishes 2) retailers as mediators between the projects and their customers. This category sells the carbon credits that are issued by the offset projects to the market. The last category is 3) compensation brokers who buy carbon credits from retailers and sell them to their customers.

The voluntary carbon market is very different from the regulatory market a multiple ways. In contrast to the regulatory compliance market, as mentioned earlier, the voluntary market does not have internationally recognized standards. Many compensation programs refer to external auditing for verification, but this is all done in a very general way without a clear message to the costumer on which the value of the offered credits can be valued (Gössling, et al., 2007; Strasdas, 2007). Other differences that were found in the literature are based on calculation methods and type of projects that are supported by the offsetting programs. The Gold Standard that has been developed in line with CDM has very high criteria for offsetting projects, and only includes energy projects due to their disbelief in forests as an efficient offset instrument. In response, the Climate, Community and Biodiversity (CCB) Project Design Standards have been developed to include forests as carbon sinks with additional positive impacts on biodiversity and local population (Strasdas, 2007). WWF Germany has published a report on the need for international standards for the carbon offset market and the authors of this report have analysed and compared the various standards for offset projects that are currently active in the carbon sector (Kollmuss, Zink, & Polycarp, 2008). In total ten standards have been compared. All these standards, however, only apply to the projects and not to the compensation programs themselves. The strong differences in approaches can seriously affect the efficiency and credibility of the programs, and therefore various authors point out a strong need for international standards.

1.3 Problem Statement

Although a lot has been written about the relatively new market of climate offsetting, only few authors, such as Gössling et al. (2007) and Strasdas (2007), have paid attention to the effectiveness of climate compensation programs. Most attention has been directed towards the potential of climate compensation, and biological sinks and emission saving as the means to compensate and to mitigate climate change. The study of Gössling et al. (2007) is the first and only attempt to map the climate compensation programs that were active during their study in 2006, and to analyse to what extent these programs are effective or not. In this study 50 carbon offset organizations were identified and of these fifty organizations, 41 were further examined. One of the main findings of this research was that the voluntary market for carbon offsetting is very heterogeneous and consequently fuzzy and not very credible. Strasdas (2007) has complemented Gössling et al.'s study and as a result defined a set of criteria to which compensation programs should comply in order to

become more transparent and credible. Furthermore there was one particular interesting finding from one of the previously mentioned studies, which has caught the researcher's attention. Gössling et al. (2007) found that all the identified and examined climate offset organizations were based in developed countries and none in the developing world. Since the conduction of this study a lot has changed in this quickly evolving 'industry' with compensation schemes popping up at high rates. As a leading country on ecotourism and its ambitious goals on mitigating climate change, Costa Rica is one of the first countries from the developing world who has engaged itself to climate compensation and consequently three climate compensation programs were initiated there in 2007.

The fact that most climate compensation programs (the retailers and brokers) are located in the developed world and the majority of offset projects that issue the carbon credits in the developing world, raises several interesting questions. One can ask himself why the retailers and brokers are mainly based in developed countries whereas the offset projects are to be found in the developed world. Due to the previously mentioned fact that the tropical countries in the developing world are more vulnerable to the negative effects of climate change, and the potential of tropical forests for carbon storage, it appears to be logic that most of the offsetting projects are situated in the countries that provide these tropical forests. An explanation for the fact that most retailers and brokers are based in the developed world could be that these countries also contribute more to climate change compared to the non-industrialized countries in the developing world. Furthermore, when looking at the contribution of tourism, and the industry's high dependency on transport that results in large tourist flows going from the developed world to the tropical countries in the developing world, it does not seem strange that the service of climate compensation is offered right in the centre of the market, being the developed countries. In relation to the finding of only a few compensation programs in developing countries it would be very interesting to know whether there are significant differences or similarities in practicalities and dynamics between these programs and programs that are based in the developed world. Besides the practicalities and dynamics within climate compensation programs, they are most probably also based on-, and/or reflect, discourses that are present in the global debates on climate change and climate mitigation. In current literature one attempt was found on identifying discourses with respect to tourism and climate compensation (see GösslingLaw & Peeters, 2007). GösslingLaw and Peeters' study dealt with discourses surrounding air travel and its (by the industry itself) perceived contribution to climate change. No study, however, has scrutinized the institutionalization of discourses in climate compensation programs. These last two issues have formed the basis of this research and Costa Rica has been chosen as the developing country with its three climate compensation programs, and the Netherlands has formed the case to represent climate compensation programs from a developed country. The following research objective has been formulated to give guidance to the study:

To develop an insight in the internal dynamics of tourism related climate compensation programs in Costa Rica and the Netherlands, and the discourses within the current debates around climate compensation that are reflected in the programs, in order to unfold differences and similarities between the two countries.

In order to comply this objective the following **central research question** was formulated:

What are the differences and similarities with respect to the internal dynamics and discourses, between the tourism related climate compensation programs in Costa Rica and the Netherlands and how do they represent the current debates on climate compensation?

The above presented objective and central research question stand at the basis of this study, and will be further elaborated on in the theoretical framework, where the specific research questions that allowed the researcher to get an answer to the central research question will be laid out.

1.4 Relevance of the Study

As noted earlier, the carbon market is a new market and as such, not much research has been done on the efficiency of carbon compensation programs. In few of the researches that have been conducted on this topic it was concluded that 'there are regional clusters of carbon offsetting organisations, with none based in a developing country.' (Gössling, et al., 2007, p. 231). One can even ask himself whether this new market supports a new form of colonialism in which the developed world controls the developing world with its high demand for carbon sinks that are offered by the tropical forests in the developing countries. This, however, will not be the focus of this research and consequently would be an interesting topic for further investigation by other scholars. Furthermore WWF Germany has published a report on the need for international standards for the carbon offset market and the authors of this report have analysed and compared the various standards for offset projects that are currently active in the carbon sector (see Kollmuss, et al., 2008). This study, however, is only focussed on standards of the offset projects and do not take the retailers and brokers that sell the carbon credits to the public.

With Costa Rica -most likely- being the first developing country having developed carbon offsetting organizations, it makes sense to wonder whether there are significant differences between the programs in this country and other programs in a developed country. By gaining an insight in these possible differences the researcher hopes to provide a first basis for further research in this new topic and to encourage other scholars to investigate the differences in governmental involvement in offset programs between developing and developed countries.

The outcomes of this research can also provide a useful reference for the programs under investigation to get an insight in how their colleague programs work in a totally different setting provided by the political background of their home base country. Furthermore policy makers that are interested in developing climate compensation programs in their country can use this research as a source of reference on how things are dealt with by the countries under investigation.

1.5 Report Outline

After having provided an introduction to the topic of climate change and climate mitigation in relation to tourism, the next chapter will provide a theoretical framework for the research and as such an explanation of the application of the policy arrangement approach that has been used to structure the investigation. Chapter 3 will give an explanation of the methodology of the research, whereas Chapter 4 presents the first results of the research. Here Costa Rican and Dutch compensation programs are described according to the four, in Chapter 2 described dimensions. Chapter 5 comprises the actual comparative analysis of the results where the differences and similarities between the programs within the two countries are described. Lastly in Chapter 6 conclusions are given as well as recommendations for future research and practical implications of the findings.

2   Theoretical Framework

2.1   Background Theories

The previous chapter has provided a short overview of the main literature and debates in relation to climate change, climate mitigation and the role of tourism in this issue. In order to get an insight in the internal dynamics of climate compensation programs a clear theory based research structure is needed, which will be provided by this theoretical framework.

Firstly we need to think about which concepts are pivotal in this research and which theories are generally used in relation to these concepts. Two of the most important concepts in this research are the concepts of institution and institutionalization, which will be explained in the next paragraphs. Arts and Leroy (2006) have distinguished two crossing dualities as the extremes of two continua within the debates on the concept of institution (see Figure 2.1). The first duality is the duality of structure in which at one extreme, agency is seen as the most important aspect that influences day to day practices in institutions, whereas on the other extreme structure is seen as the most important aspect to control internal dynamics. Based on Giddens' structuration theory it can be said that agency in general, refers to human actions and/or intentions that affect the institution in question, where structure relates to more material aspects such as rules that control the actions of actors (Giddens, 1984, 1990 as cited in Arts & Leroy, 2006; Giddens 1979, 1981, 1984 as cited in Arts & Tatenhove, 2006). One of the main critics on the structuration theory is that Giddens approaches structures as being virtual, which makes it very difficult to conduct an empirical analysis of these structures in institutions (Arts & Tatenhove, 2006). In reaction to this, more empirical approaches were developed such as the *morphogenetic approach* proposed by Archer (1996 as cited in Arts & Tatenhove, 2006), which takes cultural and social conditioning into account. In this approach it is recognized that both culture and social conditions (as a structure) influence actors' behaviour, and on the other hand, individual or group action can affect events and can consequently cause small changes in structure. As such, structure and agency are seen as interrelated and interdependent. The second duality is the duality of substance-organization in which ideational believes and discourses that explain social change, stand at one end of the duality and approaches that emphasise materialistic circumstances and variables as the explanation for social change and stabilization at the other end (Arts & Leroy, 2006).
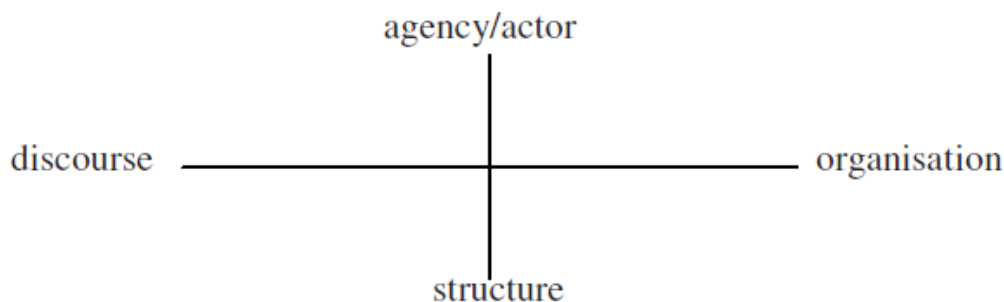

Figure 2.1 Crossing dualities in social sciences. Source: Arts & Leroy, 2006

2.2 Policy Arrangement Approach

At the centre of the policy arrangement approach (PAA), which was developed in the late nineties and the first decade of the twenty-first century by Van Tatenhoven, Arts & Leroy and colleagues (see Arts & Leroy, 2006, p. 6), stands the institutionalization of policy arrangements as a result of internal dynamics and political modernization (Arts & Tatenhove, 2006). In general institutionalization is seen as the interplay between day-to-day practices that are controlled by, and simultaneously influence structures that are at play in policy arrangements (Arts & Tatenhove, 2006). As such the policy arrangement is continuously being produced and reproduced by both the actors and the predefined rules in the arrangement, resulting in structuration and stabilization of the policy arrangement. A policy arrangement has been defined by Van Tatenhove et al. as "the temporary stabilisation of the content and organisation of a particular policy domain" (Van Tatenhove et al., 2000, p. 54).

In the PAA a new understanding of the duality of structure is specified. This new understanding is based on the impacts of interaction in policy arrangements on the structural process of political modernization. According to Arts and Van Tatenhove, political modernization is "an ongoing process of 'structural conditioning'" (Arts & Tatenhove, 2006, p. 27). One of the most important processes in political modernization is the shift from government to governance. This results in less hierarchical approaches of politics and policy in which the government is becoming to play a different role and other social groups, such as the market; non-governmental organizations etc., are gaining power in political games (i.e. Arts & Tatenhove, 2006; Boyer, 1990; Howlett, Rayner, & Tollefson, 2009; Lemos & Agrawal, 2006).

In the by Arts and Van Tatenhove mentioned structural conditioning, structural processes and properties enable and constrain the actors' behaviour. The structural properties, which are rules; resources and discourses, together with the actors who are constrained and enabled by these properties, form the analytical basis for empirical research. The actors and structural properties, from hereon referred to as dimensions, can be analyzed with the help of various theories of which the most relevant ones will be discussed here. The dimensions of actors, rules, and resources all refer to organizational aspects and as such, network theory could provide a useful framework and theoretical background for analysis. Still within the field of network theory there are several micro theory levels for analysis such as social network analysis, policy network analysis, actor network analysis, action-network analysis and more. In attempting to analyze the role of actors in a given institution, the actor network analysis provides a useful framework for doing so. The actor-network approach is an approach that is partly based on Giddens' structuration theory, but it provides a means to defeat the dualities between actors and structure that are central in the structuration theory (Duim, 2005). In the actor-network approach the relation between the social (actors) and material take a central position for research (Duim, 2005). Also within the PAA, different micro-theories within the concept of network theory, and the structuration theory have provided the basis on which the PAA is developed. There are various perspectives that can be taken when using PAA to analyze policy arrangements. One can start from the perspective of each of the four dimensions and the perspective a researcher takes depends very much on what is defined as important in the research question (Liefferink, 2006). Before the chosen perspective for this research is explained, it is important to outline what the four dimensions behold and how they are closely intertwined.

Actors and coalitions

By mapping actors and coalitions that are present, and the role(s) they play within a given policy arrangement, a first and important insight is offered in the internal dynamics in the policy arrangement under research. Every actor plays a different role and consequently has more or less power to influence what happens within an institution. In order to gain more power to influence, individual actors with the same or similar agenda's can group together and consequently defend these agenda's more effectively by asserting more power as a group. Actor coalitions can use this power to influence what happens in one or more of the other three dimensions and logically this represents the interrelatedness between actors and their coalitions, and for example the use of resources, which will be further explained in the coming paragraph.

Resources and power

As mentioned above, powerful actors and actor coalitions can influence power over the use of certain resources. Actors in each given institution or policy are dependent (to different extents) on access to certain resources such as money, knowledge, supporting infrastructure (both for communication as transportation), political legitimacy etc. (Liefferink, 2006). The more powerful actors and actor coalitions can exert control over these resources and determine on who is included and/or excluded from access. When analyzing which resources are available to whom, and to what extent the involved actors depend on, and exercise power over, the access to resources provides a useful insight in the internal dynamics of the policy arrangement under research. This insight, however, is not complete when changes that might occur in this dimension are not related to the other dimensions. A change in the use of one or more of resources and the power here over could induce a change in, for example, how the use of resources is defined in the rules of the game by officially allowing other actors to use a certain resource they were not allowed to use before. This, however, is always based on regulatory power that is often 'owned' by the same powerful actors/coalitions who, as such, form resource coalitions (Liefferink, 2006).

Rules of the game

There are many different formal and informal rules that determine what is allowed and not allowed in any given institution. Formal procedures and informal routines on interaction are often decided upon and formulated by several actors within the institution (Liefferink, 2006). How these rules are constructed is based on resources such as knowledge, but are also based on shared beliefs of how something should be structured and organized in order for the institution to work efficiently. Both the aspects of knowledge and shared beliefs relate to the other dimensions. Of course there are the actors, and their coalitions who decide on the rules of the game that involve resources and these rules are based on shared beliefs, also known as discourses, which is the last dimension that will be discussed.

Discourses

The last dimension was already shortly introduced in the prior paragraph as shared beliefs within certain actor groups. Within the PAA it is important to distinguish two different levels of discourses, namely the general ideas about the organization of society that are referred to in the first level discourses (Liefferink, 2006). Relating this to the topic of this research, the first level discourses are discourses in current debates on climate compensation. Second level discourses are at play at the micro level, and are thus found in the within the day-to-day practices of the policy arrangement. In relation to this research, these are the shared beliefs on climate compensation and how these beliefs are reflected in the dynamics of the climate compensation programs. The discourses within the programs can strongly influence how decisions are made and which rules allow and control behaviour of involved actors.

The above sections on the four dimensions of analysis in PAA have demonstrated the interrelatedness between all these dimensions. The dimensions are very dynamic as are the relations between these dimensions that can directly or indirectly impose changes onto each other. Van Tatenhove et al. have developed a tetrahedron to visualize the intertwined relation between the dimensions (Liefferink, 2006). This tetrahedron is displayed in Figure 2.2.
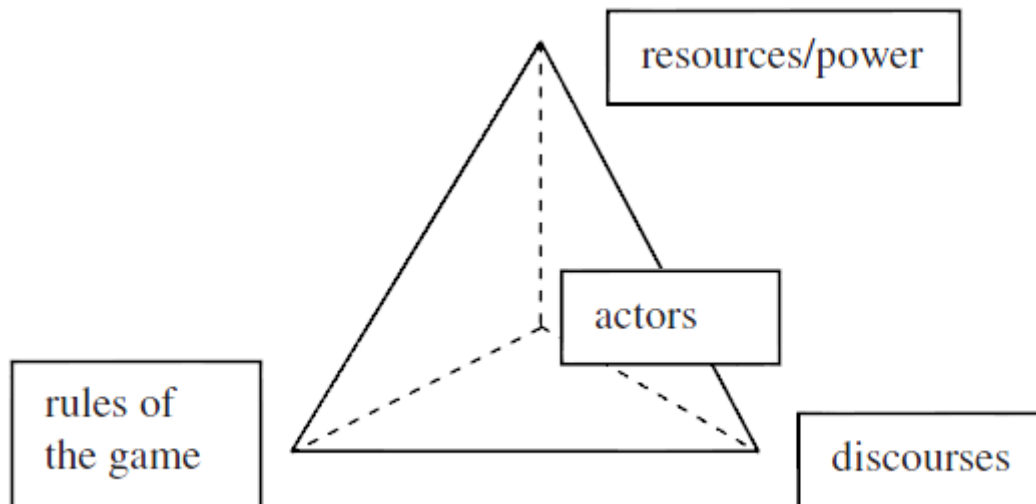
Figure 2.2 Tetrahedron to show interconnectedness between the four dimensions. Source: Liefferink, 2006

Larger structures, such as globalization and political modernization influence the policy arrangements, but reversely can possess the power to influence the larger structures as well. The policy arrangement approach offers a way to "analytically link changes in day to day practices to broader, structural changes in contemporary society" (Liefferink, 2006). As such the day to day practices are the climate compensation programs that are run in the two investigated countries, whereas the structural changes in contemporary society relate to the current debates on climate change and climate compensation.

Besides the possibility of the PAA to unfold complex relations between the different dimensions in a given policy arrangement, this interconnectedness also provides the chance to connect a policy arrangement to a certain typology. In order to be able to assign a typology to a policy arrangement Liefferink (2006) has attempted to define four ideal types that cover all four above outlined dimensions within an arrangement.

All typologies refer to the level of involvement of the government in a given policy arrangement with (1) etatism being the typology in which the government has a strong influence on the arrangement. The dominant actors in this typology are state related and vital resources are controlled by these state actors. Furthermore the rules of the game are formulated by the government and other actors have no or limited influence on neither the resources nor the rules. Lastly the dominant discourses in this typology are defined by the state without much room for other discourses that are formed outside the governmental structure. (2) Liberal-pluralism is much more based on market dynamics and as such no single actor is dominant. The resources are controlled by an equal amount of private and public players. The rules are set in a democratic manner, and it is not difficult to enter the arrangement as a newcomer. The discourses are formed by the different actors and competition allows for conflicting views in the policy arrangement.

(3) Neo-corporatism implies an equal share of resources between the state and private actors. The rules of the game are formulated and implemented jointly and there is a commonly agreed discourse. Only powerful actor coalitions who have a monopolistic position are able to enter the policy arrangement and for less influential actors it is more difficult to enter. The last typology, (4) sub-politics, is based on very specific actors who have a certain stake and as such involvement in the policy arrangement, which means that it are mainly experts who are included here. The resources are controlled by these non-state expert actors without much governmental interference. The rules of the game are formulated by "'bottom-up' joining of forces" (Liefferink, 2006, p. 62). And lastly the discourses are formed by jointly challenging existing discourses. Although all dimensions are included in these general typologies, it needs to be noted that not all the given situation within the dimensions apply in a coherent manner within a policy arrangement. In other words, there is also the possibility of finding mixed typologies in a given arrangement. The use of Liefferinks typology allows for the connection from practical day-to-day activities to the larger structures of society and as such challenges the manageability of society.

2.3   Operationalization

In order to be able to use the PAA as an analytical tool to structure the research and to make the most important concepts more concrete and observable, operational definitions of the key concepts of research are needed. The key concepts within this research are:

- Policy arrangement
- Internal dynamics
- Tourism related climate compensation programs

These key concepts were chosen by looking at the objective and central research question. Only the first concept 'policy arrangement' is not part of the research objective nor the central question, but as it appears as the basis for the theory that is used, it is nevertheless an important concept that needs to be operationalized.

A policy arrangement has been operationally defined as:

Tourism related climate compensation programs in a given country that offer individual travellers and/or tourism related organizations the possibility to compensate for the emissions caused by travelling, and that invests the financial resources that are collected in forest conservation, reforestation, renewable energy-, energy efficiency- and/or, the conversion of waste to energy projects.

This operational definition implies that the tourism related climate compensation programs in the chosen countries each form a policy arrangement within the broader policy field of climate compensation.

Internal dynamics is a very broad concept that is applicable to many different fields of research, and as such, it obviously needs to be operationally defined to make it a researchable concept. Within the context of this research, which is to investigate tourism related climate compensation programs, the definition automatically becomes much narrower and is thus defined as:

Structural processes such as resources; rules; and discourses on climate compensation that are active in the climate compensation programs under research which enable and/or constrain actors that are present in the programs.

The last concept that needs to be operationalized is the concept of tourism related compensation programs. There are many different organizations that offer climate compensation to their clients. Some of these organizations are very broadly oriented where others have specific target groups. For the purpose of this research it is important that there is a link with the tourism industry and therefore this concept is operationally defined as:

An organization that offers tourists and/or tourism related organizations the possibility to compensate their greenhouse gas emissions by investing a certain amount of money into renewable energies, energy efficiency or carbon sequestration projects.

After having provided an insight in the theoretical framework for- and operationalized key concepts in this research a more specific direction can be given to the central research question that has been given in the problem statement (see Paragraph 1.3). In order to be able to answer the central research question the following **specific research questions** were formulated:

1. *Which internal dynamics are at play in tourism related climate compensation programs in Costa Rica and the Netherlands, and which interactions take place between the dimensions?*

    a. *Which actors and coalitions are involved?*

    b. *Which resources are available to the different actors, and who has the power to control these resources?*

    c. *What are the rules of the game that are at play?*

    d. *Which discourses are reflected?*

2. *Which impacts are realized and how effective is each program?*

3. *Which ideas within the two policy arrangements reflect the discourses that are also found in the debates on climate compensation?*
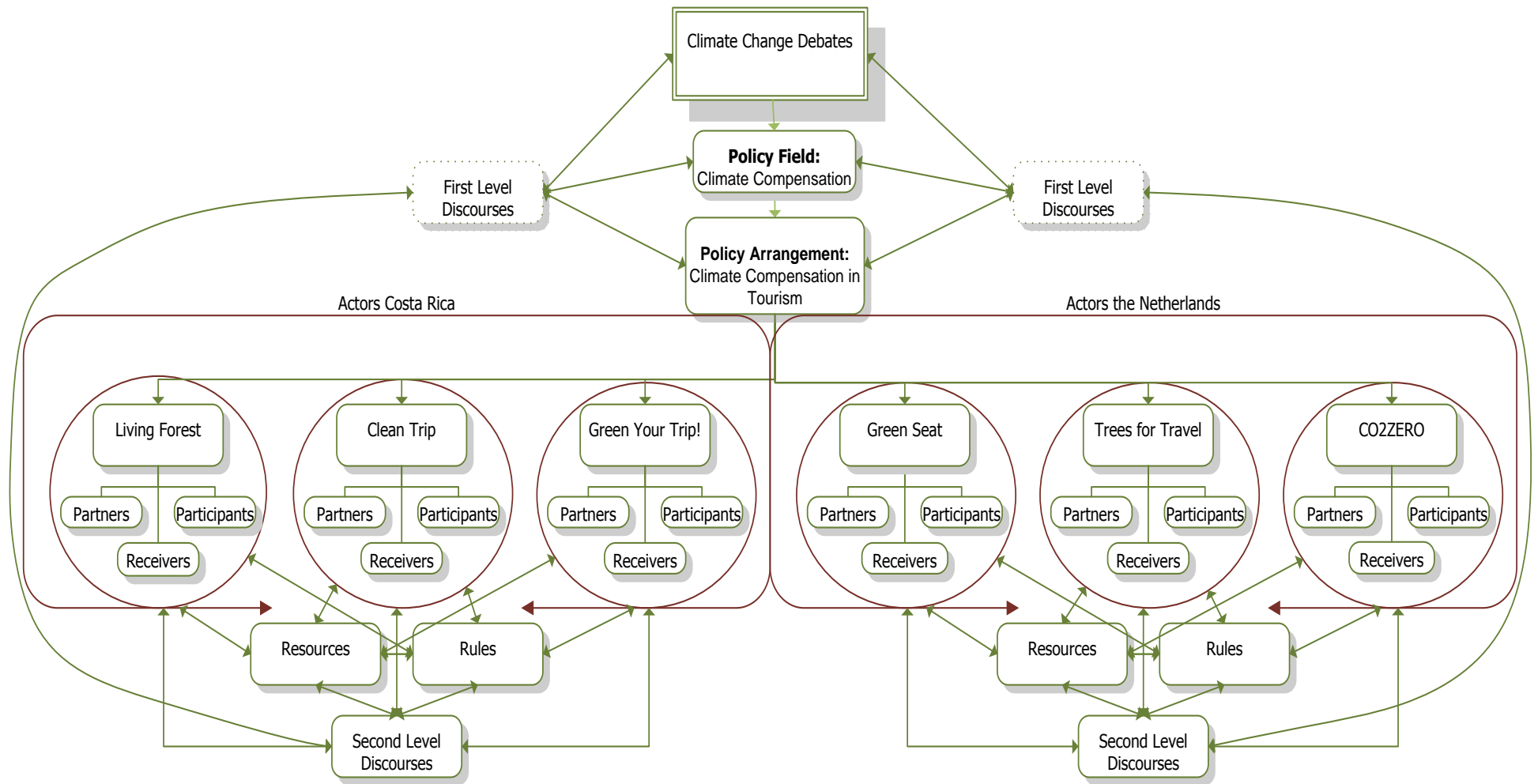
Figure 2.3 Overview of research structure

3   Methodology

This research has been conducted as a comparative case study design in which three climate compensation programs were selected per country. The selected cases are:

in Costa Rica
- Clean Trip
- Living Forest
- Green Your Trip

in the Netherlands
- Green Seat
- Trees for Travel
- CO2ZERO

The above mentioned policy arrangements and cases were chosen according to several criteria. The first criterion for the selection of two policy arrangements was based on the need for a 'developing' country and a 'developed' country in order to be able to distinguish differences and similarities between these two types of countries. Another criterion was a pragmatic one, and based on linguistic motives. Conducting research is always easier when the common shared language in the investigated case is understandable for the researcher. The use of interpreters could cause interference and distortion of facts and consequently should be avoided when possible. Therefore only Dutch-, English- or Spanish speaking countries could be selected for research. Another criterion was that the developing country should be based in the Latin-American continent since the researcher has the objective to become a specialist on this region. The selection of the specific cases in Costa Rica was not very much based on strong criteria as there are 'only' three compensation programs active in this country. Three cases in each policy arrangement could provide for an interesting insight in how the 'average' compensation program works. The Netherlands provides a larger amount of compensation programs, and therefore the programs were selected on brand awareness and direct links with the tourism industry. All the programs have to have a connection with the tourism industry and at least one of the selected cases should have a large brand awareness and one a small brand awareness.

The choice for Costa Rica, as a support receiving developing country in the Latin American continent was expected to give a very different perspective on climate compensation compared to a developed country that offers support to countries such as Costa Rica. The common language in Costa Rica is Spanish and therefore meets the criterion of language. The choice for the Netherlands as a developed country was mainly based on pragmatic reasons. Due to the background of the researcher, who is Dutch and consequently masters the Dutch language, the choice for the Netherlands as a second arrangement was easily made. Background knowledge of the researcher has resulted in the determination of programs that are linked with the tourism industry. In order to determine the level of brand awareness of these programs the search term "CO2 compensatie vliegen" resulted in 312.000 hits in google.nl. Within these results Trees for Travel occurred 2.350 times, Green Seat occurred 2.950 times, and CO2ZERO 542 times. The search term "CO2 compensatie vakantie" resulted in 72.500 hits in which Trees for Travel occurred 631 times, Green Seat 2.220 times, and CO2ZERO 78 times. This indicates that Green Seat and Trees for Travel both have quite a large brand awareness with Green Seat being the most well known compensation program in the tourism industry, and CO2ZERO the least well known compensation possibility for tourists. This is, of course, not a comprehensive analysis, but as a starting point for the selection of cases it sufficed by providing an insight in how many times they are at least mentioned on the web, and as such to create an idea of how well known these programs are. The fact that a comparative case study has been conducted allowed for an insight in the different cases and the differences and similarities between the cases and the two policy arrangements.

As research methods a literature research has been conducted alongside in-depth interviews in the field in order to gain empirical insights that could not be gained through only literature. The literature sources that have been analyzed are: theory on climate change and -compensation, policy documents, management plans, yearbooks and internet sites. When data that could not be derived from the internet and other literature, contact was made with representatives of the programs which was followed up by telephone interviews and/or short question lists. In Costa Rica also some informal conversations were held, as well as a visit to an international conference on sustainable tourism practices in Costa Rica in order to receive background information on sustainable tourism and carbon offsetting in the country. This conference has also provided for relevant connections in the field, which made it easier to get in touch with some of the relevant stakeholders. In total 31 people have been approached for information and this resulted in 13 interviews of which 9 have been conducted face to face in Costa Rica and 4 by telephone in the Netherlands. These last four interviewees were interviewed by telephone to save time, and some of the interviewees have been interviewed twice or three times. A list of the literature that has been analysed and the interviewees who have been interviewed is provided in Annex 1.

Choosing Costa Rica as one of the countries for research might have had an influence on the findings that have been done in the interviews due to the small language barrier. Although the researcher does speak and understand the Costa Rican language (Spanish), conducting interviews in a language other than the mother tongue requires a high level of understanding and interpretation in order to be able to quickly digest what is said and simultaneously divert this information into good follow-up questions to get a thorough understanding of the interview topic. Given that the researcher is still in a learning process of interviewing together with the language barrier, it seems obvious that this could have influenced the findings in this research.

It proved to be very difficult in Costa Rica to get real inside information on day to day practices within the programs through the conducted in-depth interviews. In order to receive more in-depth information other actors were approached, but this resulted in a relatively high non-response. This non-response could be explained by the fact that these people have been approached in the end of November and beginning of December. It could be the case that this was too short before Christmas and the end of the year, and consequently is a very busy period, whereby people did not have the possibility to invest time in an interview. All in all, however, it seemed as if there was a reluctance to let the researcher really enter the policy arrangement and to allow a clear insight in what is actually going on.

The data was analyzed based on the specific research questions that were all based on the dimensions from the policy arrangement approach. In analyzing the compensation programs a topic list was used of which all the listed topics should be handled. This list (displayed in Annex 2) has been used to obtain answers to the research questions and clearly offered a good basis for analyzing the programs on the same topics and as such to be able to compare them to each other. The data gathered with the use of this topic list has been put in a table of comparison in order to gain a comprehensive overview of the data per program.

4 Climate Compensation Programs in Costa Rica and the Netherlands

Costa Rica and the Netherlands: two countries with totally different backgrounds. One is a so called developing country and the other is part of the developed world. One is famous about its nature conservation and ecotourism, the other because of its traditional windmills and bulb flowers. Both countries, however, play a role in the issue of climate change and do their best to battle it, with Costa Rica even aiming to become carbon neutral by the year 2021 (Paz Con La Naturaleza: Plan de Acción, 2008). In the Netherlands, CO_2 compensation programs that relate to the tourism sector allow travellers to compensate for their flight emissions and the compensation money often goes to countries in the developing world due to the fact that these areas are the ones with the biggest amounts of forests and the assumed space to be reforested or afforested since industrialization has not -yet- been fully developed. Costa Rica is one of those countries with a high amount of forests, of which more than 25% already is protected by the government. Furthermore, the government stimulates private landowners to conserve their forest or re- or afforest their land through the Payments for Environmental Services (PES) system. Since Costa Rica is one of the non-Annex I countries it can generate CER's under the Clean Development Mechanism and sell these to Annex I countries, -such as the Netherlands- that have difficulties in achieving their national Kyoto reduction target.

Both countries do their best to battle climate change and to reduce greenhouse gas emissions. Although there are many technological developments and measurements that can be taken to reduce greenhouse gas emissions, there will always be a certain amount of emissions that cannot be taken away. Therefore climate-compensation programs are being set up in order to capture greenhouse gas emissions, of which the most well known is CO_2 or carbon emission. In Costa Rica there are three actual initiatives to offset carbon emissions through planting trees and one initiative to enhance the participation in these programs. The Costa Rican government has set up two of these initiatives that are administered by FONAFIFO[*], which are Living Forest (Bosque Vivo in Spanish) that is targeted at organizations that are situated in the country being national or international, and Clean Trip (Viaje Limpio in Spanish, also known as Clean Travel) which is targeted to individual travellers that fly from or to Costa Rica. A third initiative has been set up by the private sector and aims at organizations/businesses, tourists, and car owners. This program is called Green Your Trip, but since its recent change of name is better known as Alliados Cambio Climático (ACC). In October 2009 FONAFIFO and the National Chamber of Ecotourism (CANAECO) came to an agreement to initiate the Climate Conscious Travel program that encourages the tourism sector to participate in CO_2 compensation programs by sharing the costs for compensation.

The three compensation programs in the Netherlands are all set up by the private sector, with one being a charity foundation. The first program that will be outlined is Green Seat and is targeted at air travellers whom are offered their services through travel agencies and directly via the Green Seat website. The second program is Trees for Travel and the aforementioned charity foundation which targets businesses/companies, individuals, travel agencies, and governments. These two programs do not only compensate carbon emissions but also other emissions (CO_2-equivalents[*]) generated by aircrafts that are extra damaging when generated in the higher atmosphere. The final compensation program investigated is the KLM Airline initiative CO2ZERO that targets its passengers to compensate for their CO_2 emissions. In this chapter a description of these programs will be given on the programs' backgrounds, after which a description based on the PAA dimensions will be given.

The outline of the chapter is as follows: in paragraph 4.1 the Costa Rican programs will be scrutinized with in paragraph 4.1.1 the background of Living Forest and Clean Trip together, whereas in paragraph 4.1.2 Living Forest is discussed according to the PAA dimensions, and in paragraph 4.1.3 the same is done with Clean Trip. Hereafter paragraph 4.1.4 will deal with the private initiative Green Your Trip, and lastly in paragraph 4.1.5 the supportive instrument of Climate Conscious Travel is explained. Paragraph 4.2 will subsequently deal with the Dutch climate compensation programs, with Green Seat being the first to be described on its background and according to the dimensions of PAA in paragraph 4.2.1. Secondly in paragraph 4.2.2 Trees for Travel will be illustrated in the same manner, and lastly of all the investigated programs CO2ZERO is scrutinized in paragraph 4.2.3.

4.1 Costa Rican Programs

In this paragraph the three Costa Rican programs will be described as well as the Climate Conscious Travel program that has been developed in order to increase the participation in Clean Trip. Firstly the background of Living Forest and Clean Trip will be clarified together since they share the same background. After this description Living Forest will be depicted through the four dimensions of PAA, and subsequently Clean Trip is described according to the same principles. Then the private initiative of Green Your Trip will be illustrated similarly. Due to the fact that Climate Conscious Travel is a supporting instrument to enhance participation in Clean Trip, and in itself is not a compensation program, it is not possible to make a comparison with the other programs according to the PAA dimensions. Therefore the ideas and practicalities behind Climate Conscious Travel will be discussed separately from the other programs in the last paragraph.

4.1.1 Background Living Forest and Clean Trip

Before a good description of Living Forest and Clean Trip can be given it is important to note that Clean Trip forms the basis for almost all communication about CO_2 compensation efforts that take place through FONAFIFO. During an interview with Alberto García -responsible for FONAFIFO's CO_2 compensation programs-, it was found that Clean Trip only offers compensation to individual travellers for international flights, whereas the national organizations and companies that claim to use Clean Trip for their compensation efforts, in reality use another program which was not mentioned by name. At some stage in the research it became clear that this other 'mystery'[2] program is often referred to as Certificates for Environmental Services (CSA is Spanish acronym). As will be explained in the following sections, CSA is an umbrella concept under which Clean Trip and two other programs are positioned and not one of the programs as such. The two other programs are referred to as Living Forest (translation for Bosque Vivo) and Vital Water (translation for Agua Vital). A further scrutinizing look at these programs lead to the assumption that Living Forest must be the mystery program that is used by the national organizations to compensate for their domestically generated carbon emissions, since Living Forest offers participants the possibility to donate money for forestry projects whereas Vital Water only involves water issues. There is, however, an important remark to this assumption since there are no references to CO_2 compensation in the communication about Living Forest on FONAFIFO's website. Since January 2010 FONAFIFO only presents its website in Spanish and the only information on a CO_2 compensation program that can be found is the information about Clean Trip as being an instrument that offers only individual travellers to compensate for international air travel. Both on the English version of the website that was found in September 2009 and a leaflet that has been provided by Garcia (2009), controversial information was found that indicates that not only individual travellers

---

[2] This is called a mystery program since it was never mentioned by name by García and the researcher had to find out for herself what García was talking about when mentioning this 'other' program.

on international flights can compensate their emissions through Clean Trip, but also that "Any person, company, organization or national and international group can purchase the Environmental Services Certificates (ESC) [ESC=CSA] under the category of Clean Travel; (...)" (FONAFIFO, 2007c). The same leaflet as mentioned above also mentions some organizations as examples that already compensate their CO_2 emissions via Clean Trip. In order to avoid further ambiguities in this report, the researcher has chosen to interpret and digest the information above as Living Forest being the other program that is used to compensate for CO_2 emissions that are generated domestically, and Clean Trip the program that is used for international flight compensation. Having clarified that, the following section will illustrate the background of both Clean Trip and Living Forest.

Living Forest and Clean Trip are two tourism related initiatives that prove that biodiversity conservation can indeed be combined with carbon sequestration. Living Forest and Clean Trip are instruments under the CSA mechanism that allow Costa Rica to trade environmental services that are generated in existing forests and reforestation[*] and afforestation[*] projects on national and international markets.

In summary, and as can be seen in Figure 4.1, FONAFIFO is a semiautonomous agency that operates under the president of Costa Rica and co-operates with other government departments related to nature conservation. Under FONAFIFO CSA's the three programs Clean Trip, Living Forest, and Vital Water are used as financial instruments in order to provide financial resources for PES. Clean Trip and Living Forest are the tourism sector related categories and each targets its own costumer segments in the tourism industry. A further description of these costumer segments/target audience is given according to the four PAA dimensions; actors and coalitions, resources, rules of the game, and discourses in the following paragraphs. It needs to be noted however, that there will be some overlap of information between the Living Forest and Clean Trip initiatives since they are both part of the same organization and due to the strongly interwoven relation between both programs.
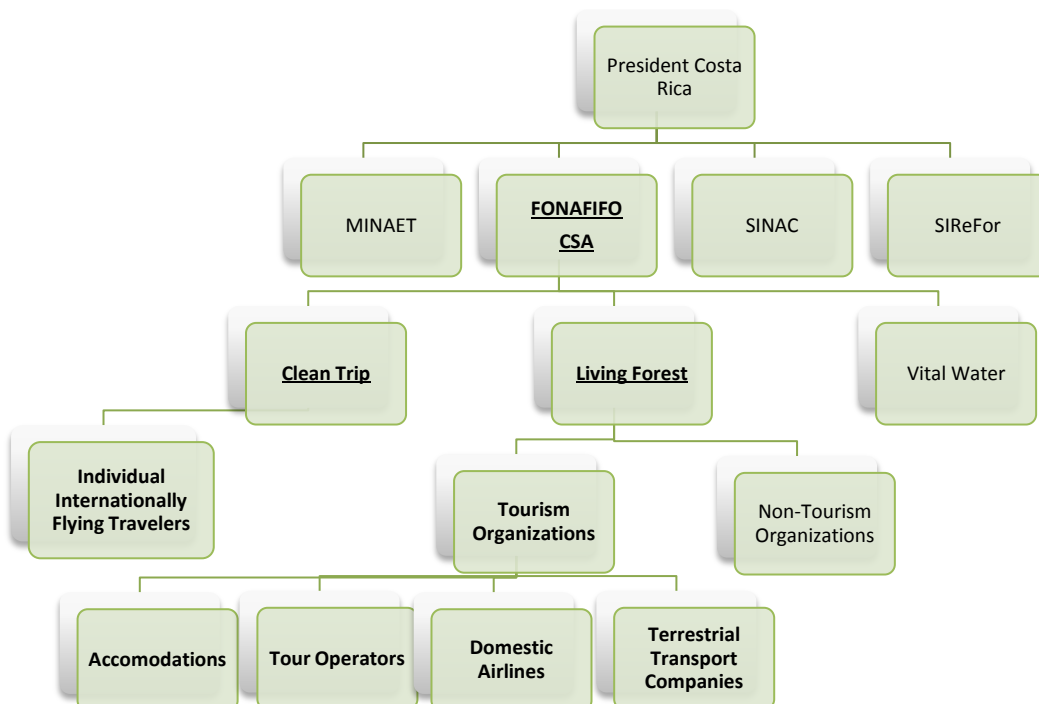

Figure 4.1 Organizational Overview Clean Trip and Living Forest

4.1.2   Description of PAA Dimensions within Living Forest
Actors and Coalitions within Living Forest

Living Forest is, as noted above, a financial instrument for PES and allows every person, business, and organization being national or international to buy Certificates for Environmental Services and choose a province in which the money should be invested in order to protect the environmental resources that are situated there. It is set up with the goal to increase the financial resources for the Payments for Environmental Services system that allow Costa Rica to protect their forests and reforest or afforest areas that are currently used as agricultural land. In this way Costa Rica can offer more CO_2 credits to the market. As can be seen in Figure 4.1, the main actor in the program is logically the government since it is a governmental initiative that is governed by FONAFIFO. As a governmental fund there are no shareholders other than the government, and FONAFIFO works together with other environmentally related government departments such as MINAET (Ministry of the Environment, Energy and Telecommunication), SINAC (National System of Conservation Areas), and SIReFOR[*] (National System of Information on Forest Resources). These can be seen as indirect operational partners. Indirect since they are not directly related to Living Forest as a program, and operational due to the fact that these departments take care of certain operational duties that do not concern FONAFIFO as such. Another operational partner is CANAECO, the National Chamber of Ecotourism, that is directly related to FONAFIFO through the new initiative Climate Conscious Travel, which tries to enhance participation in the compensation program[3]. Furthermore there are strategic and financial agreements with national, international, private, and public organizations in order to enhance credibility and raise financial funds such as Energía Global de Costa Rica; Compañia Hidroeléctrica Platanar; Florida Ice & Farm Co; Compañia Nacional de Fuerza y Luz; and CATIE (Tropical Agricultural Research and Higher Education Center[*]) together with the National Bank of Costa Rica (BNCR).

When looking at the scope of Living Forest it was found that it mainly targets at national organizations to compensate for CO_2 emissions, but there are some international organizations involved as well. All the projects that are executed by FONAFIFO, and thus Living Forest, are national. The financial resources however, come mainly from international organizations[4].

Currently there are 49 participants in Living Forest of which 15 are tourism related that compensated for their CO_2 emissions by buying CSA's[5]. As can be seen in Table 4.1, the categories in which the currently participating tourism related organizations[*] are divided are: tour operators, accommodations, domestic airlines, and terrestrial transport companies. This does not include other segments (e.g. transport companies that offer travel over sea) that can also compensate their CO_2 emissions, but that are currently not active in doing so. Two of these tourism related organizations that are active in carbon compensation are the national airlines Nature Air, and Sansa Regional, who interestingly both claim to be the first carbon neutral airline of Costa Rica. Whereas Nature Air even claims to be the first carbon neutral airline in the world. Furthermore there is the self claimed carbon neutral car rental Mapache Rent a Car; Adobe Rent a Car and Budget Car Rental –which both offer extra voluntary compensation to its customers–; and additionally Europcar; National; and Alamo as car rentals that have bought CSA's. Interbus is the last participant from the transport sector. Also the tour operators Horizontes Nature Tours and Travel Excellence and the hotels Marriot Resorts Los Sueños and San José; and Playa Nicuesa Rainforest have bought CSA's (FONAFIFO, 2007b). And lastly, CANATUR and ACOPROT that compensated Expotur –a national tourism fair–

---

[3] More information on Climate Conscious Travel will be given in Paragraph 4.1.5
[4] For a further explanation of these financial resources see section 'Resources within Living Forest'
[5] For a complete overview of the participants see Annex 3: Participating Organizations FONAFIFO

and further activities, have compensated their emissions by buying the certificates. How much each of the participants has compensated is not known.

All of these tourism related organizations compensate their own operational emissions via Living Forest, but most do not offer this as a voluntary option to their clients. It is all integrated in their company policy. Adobe Rent a Car and Budget Rent a Car are the only two organizations that, at the time of research, offer their clients to voluntary compensate for their emissions by charging respectively US$2,- and US$1,- for the entire rental period. It needs to be noted, however, that Adobe Rent a Car markets this voluntary compensation as being a Clean Trip compensation, whereas Budget Rent a Car only mentions FONAFIFO and its CSA program. Nature Air already compensates for every flight as an integrated part of their policy. However, due to signals from clients who expressed a desire to compensate for their individual flight emissions, Nature Air is –at the time of research– seeking for a way to actively involve clients in the compensation of their individual flights. Some organizations also claim to compensate their international business flights when applicable. These compensations together with the above mentioned voluntary compensation efforts of the two car rentals, would consequently be categorized under Clean Trip and as such, indicate how inextricably interwoven these two programs are.

The above already demonstrates the mutual relationship between Living Forest and Clean Trip[6]. Besides this strong relation Living Forest will also be related to the new program Climate Conscious Travel in the close future, although the practical relation still has to be established due to the fact that the latter is just starting and in its developing phase and therefore not been put into practice yet. More information about Climate Conscious Travel will be given in Paragraph 4.1.5. Living Forest is also indirectly related with the private initiative since Horizontes Nature Tours not only compensates with FONAFIFO but also via Green Your Trip program.

Resources within Living Forest
In order to be able to pay local farmers for their reforestation or conservation efforts through the PES mechanism there are several financial sources available to FONAFIFO, PES, and consequently also to Living Forest. Living Forest is one of the (market based) financial sources besides others to pay for the Environmental Services. In the following section the different financial resources will be presented.

The main source of funding for PES is 3.5% of a nationally levied obligatory 15% fuel tax –also known as 'ecotax'– which has to be paid at the purchase of all types of fossil fuels. Furthermore PES has been financially supported nationally by:

- Energía Global de Costa Rica with US$40.000 a year;
- Compañia Hidroeléctrica Platanar with US$39.000 a year;
- Florida Ice & Farm Co with US$45.000 a year;
- Compañia Nacional de Fuerza y Luz with 436.000 a year[7];
- and CATIE (Tropical Agricultural Research and Higher Education Center) together with the National Bank of Costa Rica (BNCR).

---

[6] For more information about Clean Trip, see Paragraph 4.1.3.
[7] All the financial figures come from (Rodriguez, 2005 in Porras, Neves, & Miranda, 2006). See also Annex 4: Financial Resources FONAFIFO in 2004.

PES Costa Rica is internationally supported by:

- World Bank (Ecomarkets Project together with GEF[*], and a Bio-Carbon Fund (Rodríguez, n.d.);
- Global Environment Facility (GEF) together with the World Bank through the Ecomarkets Project a US$8 million loan a year (in total US$40 million) (Rodríguez, 2005 as cited in Porras, et al., 2006, p. 11; Sánchez-Azofeifa, et al., 2007, p. 1167);
- KfW -a German aid agency- with US$11.9 million (Pagiola, 2008, p. 713; Rodríguez, 2005 as cited in Porras, et al., 2006, p. 11);
- Japanese Fund for Policy Development and Human Resources that financially supported the Reforesta project with US$300.000 (Porras, et al., 2006, p. 11)
- and Conservation International[8].

The so called national REFORESTA project seeks for financial resources by planting trees for commercial use. The project received financial support for its design phase (2002-2004) from the Japanese Fund for Policy Development and Human Resources. After this phase financial funds are drawn from the sales of wood that has been planted for this commercial purpose (FONAFIFO, 2007f; Porras, et al., 2006). A new initiative to ensure financial resources and to financially assist new biodiversity conservation projects in the PES system in Costa Rica is the Sustainable Biodiversity Fund. It aims to obtain financial funds from public and private organizations that are interested in biodiversity conservation (FONAFIFO, 2005). This is done through selling the Certificates for Environmental Services and carbon credits amongst others via Living Forest and Clean Trip, and allow users to make voluntary donations for carbon sequestration. In relation to the sale of carbon credits it was announced in the media in September 2009 that the government has sold carbon credits for the amount of US$9 million, which is the equivalent for the compensation of 3 million metric tons of CO_2, to an American organization called Equator (Loaiza, 2009).

According to García (personal communication, 2009) 100% of the money that is collected through the selling of the Certificates for Environmental Services goes to the landowners. Interestingly enough Nature Air (Nature Air, n.d.) claims that roughly 20 percent of their money goes to administrational costs and 80 percent to the local landowners. This is obviously a difference in communication, but it is reasonable to believe that there are always administrational costs involved and that therefore not the total amount of money that is invested by the participants flows directly to the land owners. FONAFIFO however, has additional financial resources from funds, grants, and loans and can use that money to cover for the administrational costs and therefore ensure that 100% of the money from participants goes to the landowners (personal communication, García, 2009). Where the actual truth lies is still the question. As explained above, there are different financial resources which are collected by FONAFIFO. According to Garcia (personal communication, 2009) all these financial resources are collected in one big fund from where the money is eventually distributed to the local farmers who have applied for, and been approved to receive payments for the environmental services they provide with their land. This distribution system is very opaque and makes it very difficult to determine where the money from the different sources actually ends up. In the media, however it is stated that some participating organizations have donated their compensation money directly in projects in the biological corridor between Osa Peninsula and Piedras Blancas National Park, which has been confirmed by several of these organizations (personal communication, Mapache Rent a Car, 2009; personal communication, Sansa Regional, 2009). According to Garcia the participating organizations can suggest where they want their money to be invested, but eventually FONAFIFO decides on where the money goes (personal communcation,

---

[8] No financial figures were found on financial support from Conservation International.

2009). It is not known however, whether this means that the money could be directly distributed to a certain region –as is claimed by the media and organizations who compensated through FONAFIFO–, or whether it first flows into the fund and subsequently is being split up between different areas and/or projects –as Garcia (personal communcation, 2009) claims–.

The projects that are supported by FONAFIFO are mainly forestry projects. The projects have to provide and support at least one of the six different services that are included in the PES system. The service of carbon sequestration is the service that is directly related to Living Forest. All the services can be supported by buying CSA's via Living Forest, although carbon sequestration is most often used in the communication of the participating organizations. Currently FONAFIFO claims to have seven CDM projects running that are used for carbon sequestration and the trade in CER's (FONAFIFO, 2006). UNFCCC, however lists six carbon sequestration projects under CDM (UNFCCC, 2010). The projects that are published on the website of FONAFIFO show that all these seven projects are forestry projects, whereas the information on the CDM website displays no forestry projects at all, but renewable energy projects for Costa Rica. Whether there are CSA investments - being it Living Forest, Clean Trip or another instrument- that are directly distributed to these seven CDM sequestration projects is not clear. All these issues that are brought up here logically raise many questions related to these CDM sequestration projects in Costa Rica, which unfortunately cannot be answered in the scope of this research.

When looking at the locations of the projects it was found that all the money goes to projects within Costa Rica. In selecting the areas that have a priority in receiving financial support the following aspects are important:

- location of rural aqueducts,
- watershed areas,
- location of underground water wells,
- areas with degraded soils,
- areas with a biodiversity of global importance
- and socio-economic criteria (FONAFIFO, 2005).

Through the Ecomarkets project (the financial support system by GEF and the World Bank) the areas of Osa Peninsula, Amistat Caribe, and Tortuguero were prioritized (FONAFIFO, 2007). According to Garcia, these areas are still prioritized at the time of research (personal communication, 2009). As noted above FONAFIFO has assigned seven projects to carbon sequestration, which are vigilantly related to Living Forest since both the program and the projects are regarding to sequestration. Nevertheless it needs to be noted that they are not officially related since it is not sure whether financial resources that are obtained via Living Forest are directly distributed to these seven sequestration projects of FONAFIFO.

These sequestration projects are situated in:

- the Nicoya Province;
- Los Santos, which is located in the provinces of San José and Cartago;
- San Isidro, which is to be found in the province of San José;
- indigenous terrain of the Cabagra, Ujarras and Salitre tribes in the province Punta Arenas;
- indigenous Brunka terrain in Punta Arenas;
- Coto Brus County in Punta Arenas;
- and San Carlos, Los Chiles, Guatuso, Upala y Sarapiquí in the province of San José.

None of these seven projects are situated in one of the prioritized areas. It needs to be noted, however, that there are many projects situated in the rest of the country and the prioritized areas, that are not labelled as sequestration projects, but technically taken, sequester as well. Much of the information that is published by the media and the participant organizations – e.g. Mapache Rent a Car, Nature Air, Sansa Regional etc.- indicate the Osa Peninsula, being one of the prioritized regions, as the area to which they donated the money. FONAFIFO, nevertheless could not confirm that the money has been invested directly and only in the areas chosen by the participants, but that the possibility is offered to participant organizations to give a preference for certain area. FONAFIFO, however, makes the actual decision whether the money goes to the chosen area of preference. and that it is impossible to trace every single dollar that has been donated to a particular area since all the donated money goes into the fund, and from thereon is distributed to different landowners (personal communication, García, 2009). Due to the fact that the aforementioned organizations communicate the Osa Peninsula as the destination into which their money is invested, it can be assumed that this 'sequestration' money is not invested in any of the assigned sequestration projects.

The knowledge distribution about the program and the need to address environmental issues towards the public is mainly realized via the website. Unfortunately there is no information found on how knowledge on environmental issues and the need to address these, and the existence of PES to help the local landowners to do so is communicated to these landowners. The national program Peace with Nature, that is initiated by the government with the aim to bundle efforts to combat climate change, is nonetheless a way of the government to distribute knowledge about the above mentioned issues. There are initiatives to educate local people on environmental issues that are indirectly linked to FONAFIFO, such as the fact that a governmental delegation went to a problem area with serious environmental conflicts in order to educate the local police departments/officers, judges and Ministers of Justice on the need to protect the biodiversity in the region and on which practices are allowed and which not (personal communication, León, 2009). This, however, is not directly related to FONAFIFO and, as noted above, no information on how FONAFIFO distributes knowledge on the governments' desire to protect the forests and the PES instrument FONAFIFO offers in order to help the local landowners to contribute in forest conservation/protection was found.

The decisional power within the program lies with FONAFIFO as this is the entity through which everything is arranged. Not much of this power seems to be distributed to other stakeholders. Currently FONAFIFO has a new agreement with CANAECO to use only native species when planting trees for compensation that is realized through the Climate Conscious Travel initiative. One of the main critics on FONAFIFO is that it uses non-native tree species for reforestation and afforestation. The fact that CANAECO was able to negotiate with FONAFIFO on the use of native tree species indicates that large actors can influence decision making within FONAFIFO. However, it needs to be stated that it took CANAECO 1.5 year to convince FONAFIFO that one of the most important terms would be that only native tree species are used and to come to that agreement (Stein, 2009a). Based on this information and personal off-the-record communication with an anonymous respondent, it can be assumed that there are some powerful actors involved that can influence decision making related to the Living Forest program, however during the field research no additional 'official' proof for this could be found. Despite the lack of proof throughout the fieldwork of this particular research, there have been other investigations that were able to distinguish uneven power divisions related to the CSA's, and therefore the Living Forest program. An example has been given by Friends of the Earth International and the Global Forest Coalition (2005) of a hotel owner who has bought a patch of land that was submitted to PES programs -which are financially

supported by CSA's- and additionally bought CSA's for his patch of land. This gave the land/hotel owner all the power over the water resources on his newly bought land, and exercises this power by not allowing the local people, with whom the land owner was in conflict about the water usage and are dependent on the water resources, to access them (Friends of the Earth International & Global Forest Coalition, 2005). One of the main critics in literature on PES systems is that it allows large landowners to remain powerful (Pagiola, 2008), which is strengthened by the CDM projects that in order to be cost effective, have to include large areas and consequently excludes small landowners (Friends of the Earth International & Global Forest Coalition, 2005).

Rules of the Game within Living Forest

There are many different rules involved in programs such as Living Forest. In this research the formal rules of the game around the following issues are investigated:

- application procedures,
- contracts,
- calculation mechanisms,
- CO_2 generators that are compensated,
- quality control,
- laws and conventions,
- payment systems,
- compensation costs, and
- emission types that are compensated[9].

When an organization decides to participate in the program it can call, fax, email, or send a letter to FONAFIFO. They have to let FONAFIFO know which generators of CO_2 they want to be compensated and how much they want to compensate and consequently FONAFIFO will make the calculations and inform the company in question how much they will have to pay in order to compensate for its emissions. This is all recorded in contracts that are signed for a minimum of five years in which a minimum of 1 hectare should be assigned to be protected (FONAFIFO, 2007e). Travel by car, boat, domestic air travel, and other tourism related activities such as for example the gas needed for cooking etcetera are the generators that can be compensated through the program.

In order to apply for financial support from PES there are several steps that need to be taken by the applicant. A sustainable forest management plan that is prepared by a licensed forester must be provided. When this is approved the landowner has to start to adopt the planned activities and consequently receives the payments. After each year the plans are verified for compliance and if this is fulfilled the annual payment will follow (Pagiola, 2008). When compliance is not achieved the payment will stop and when foresters incorrectly certify compliance they can consequently lose their license (Pagiola, 2008). There are four types of contracts involved in receiving this financial support. The first is a contract for landowners that want to conserve the forest they have on their land. For this contracts of 5 years are issued. When a landowner wants to reforest the land 15 year contracts are involved, in which 50% is paid in the first year, 20% in the second year, and 10% in every following year in order to maintain the forest. Thirdly there is the agro forestry[*] contract that allows landowners to combine agricultural activities with forest conservation, and lastly natural regeneration contracts that allow landowners to let their lands that have been deforested before 1986 to be left alone for natural regeneration and involves a 10 year time span (Porras, et al., 2006).

---

[9] For a complete overview of investigated factors, see Table 4.1 Comparison dimensions within the Costa Rican Programs

The calculation mechanism that is used by FONAFIFO for calculating the costs for compensating carbon emissions is based on the IPCC guidelines for calculating emissions.

There are different ways to ensure the quality of a certain product, as also with carbon sequestration programs. When taking the PES payment receivers into account, it was found that they are controlled/monitored by FONAFIFO on whether the activities of the landowners are in line with the agreements. FONAFIFO itself is controlled/monitored nationally by independent organizations such as the Agronomic Centre of Tropical Agricultural Research and Education (CATIE), the National Forestry Board of Farmers (JUNAFORCA), and internal and external audits are done by the General Controller of the Republic (FONAFIFO, 2007d). The carbon sequestration projects are self claimed CDM projects, which means that they should have to meet the international CDM standards. If the projects are actual CDM projects, it is periodically tested by independent organizations that are assigned by UNFCCC whether the projects meet the standards and criteria that have been set by CDM. Being verified the project is certified and the certification is consequently a proof of verification (UNFCCC & CDM Executive Board, 2009). No, proof of certification though, was found on the sequestration projects of which FONAFIFO claims to be CDM projects. One of the respondents mentioned the CSA's as an important quality measurement for the compensation programs from FONAFIFO. This is an interesting observation since CSA is not a quality ensuring entity, it is just an instrument that is used to sell environmental services.

There are several international and national laws, regulations, and agreements that legitimize the existence of Living Forest as a carbon sequestration program. On international level the United Nations Framework Convention on Climate Change (UNFCCC) with its Kyoto Protocol and Clean Development Mechanism form the background on which the program has developed. The carbon sequestration projects that FONAFIFO claims to run under the CDM and other forestry projects that are executed in order to mitigate CO_2 emissions reflect this. On the national level the program is backed up by many laws and regulations, but the most relevant in relation to Living Forest are Forestry Law 7575 under which FONAFIFO has been set up, and that, together with Forest Law 7174 and the Executive Order 19886-MIRENEM form the background of the existence of FONAFIFO in order to allow it to administer the finances involved in Costa Rica's forestry policies (FONAFIFO, 2007a). Furthermore Costa Rica has several national policies that stand at the origin of FONAFIFO's policies and of which Living Forest could be seen as a program that contributes to these policies. The National Development Plan, the National Forestry Development Plan, and the National Plan for Climate Change are incorporated in FONAFIFO's policies and therefore in Living Forest. The latter plan stands at the basis for Costa Rica's aim to become a carbon neutral country by 2021, and is consequently the most relevant policy for carbon mitigation activities and thus Living Forest. Furthermore there is the Peace with Nature Plan of which Living Forest can be seen as a contributing program in order to achieve the goals that are set in this national plan.

Due to the fact that FONAFIFO is a governmental organization the donations/payments that are done through Living Forest are tax-deductible for Costa Rican citizens. Another point of investigation was the inclusion or exclusion of certain greenhouse gasses in the compensation programs. There are several greenhouse gas emissions that are generated with human activities and that are stored in the atmosphere. CO_2 is the most commonly known of these greenhouse gasses and consequently offered for compensation in many sequestration programs. Logically, by compensating only for the CO_2 emissions and not the other emissions, only part of the solution is offered. Therefore it is seen as worthwhile to investigate which greenhouse gas emissions are offered for compensation per compensation program. In doing so it was found that Living Forest only offers CO_2 emissions for

compensation and they do so at the price of US$3.65[10] per ton of CO_2. The payments can be done with the payment systems of VISA and MasterCard since, according to Garcia, these are the most widely used credit cards (personal communication, García, 2009).

Discourses within Living Forest

Living Forest was also analyzed on second level discourses. These second level discourses are ideas and narratives that are institutionalized in day to day practices of the policy arrangement, and consequently in the investigated program. The analysis was made by looking at the external legitimacy from which the program derives its existence; the latitude of the program; and the types of projects that are included in the program. Living Forest derives its legitimacy from several national and international policies and conventions. These policies and conventions reflect certain discourses, which are consequently reflected by Living Forest. The latitude of the program says something about the discourses that are at play through the in- and exclusion of certain participants and consequently the influence they can exert on the ideas about prioritizing certain areas to receive the payments. The last aspect in which discourses are reflected are through the types of projects that are chosen to receive payments and the contracts that are involved in these projects.

Costa Rica as a country is very much involved in forest conservation and has many national parks. In addition to this the PES system was initiated in order to increase reforestation outside the national parks. The forests of Costa Rica are seen and used as carbon sinks and carbon sequestration is one of the environmental services that have been assigned to PES. In choosing to offer financial support for reforestation, afforestation or forest conservation initiatives it is acknowledged that trees, and logically forests, function as a means to sequester carbon emissions from the atmosphere and that they should be protected against i.e. logging, mining, and other development activities that could damage the forests. The fact that there were no renewable energy projects found that are supported by Living Forest's compensation payments reflects FONAFIFO's background as a fund that is used to protect and increase the Costa Rican forests, and consequently reflects a *forests for climate compensation discourse*. Costa Rica is also known as a ecotourism destination and as such the tourism industry is heavily dependent on the quality of forests as they provide scenic beauty and consequently attract nature loving tourists from all over the world. The choice for only forest projects in Living Forest's portfolio reflects the believe in forests as a means to sequester carbon dioxide[*] and to be connected to the compensation efforts of Living Forest.

The second discourse that is identified is the *sustainable development discourse.* The Peace with Nature initiative and the National Development Plan, from which Living Forest derives its legitimacy, reflect this discourse that allows "(…) economic growth, environmental performance and the conservation of natural resources (…) [to] go hand in hand, benefiting both present and future generations." (Arts & Buizer, 2008, p. 5). The reflection of the sustainable development discourse in PES and consequently Living Forest was not only found through the aspect of legitimacy, but is also reflected in the types of projects that are supported, and the latitude of the program. The agro-forestry contracts, and as such the types of projects, that are included in PES, show that forest conservation is used in combination with agricultural activities and that one activity not necessarily excludes the other. Furthermore this discourse is reflected in the activities that involve the tourism sector. It was found that the provision of scenic beauty, as one of the environmental services, allows the landowner who receives PES, to develop sustainable tourism practices on his/her land and consequently create an additional economic value to the land and the forest that he/she protects. The latitude of the program shows that there are several large tourism related organizations that participate in Living Forest and consequently use their influential power to

---

[10] Price is based on the Interbank exchange rate for Monday, February 8, 2010 and inclusive tax

prioritize areas that have a large attraction factor to tourists due to high levels of scenic beauty. This points at a way to support sustainable tourism practices in these areas, and consequently the sustainable development discourse.

The third discourse is very much based on the international debates on climate change and climate mitigation. These debates and the Kyoto Protocol that has come out of these debates have inspired the Costa Rican government to formulate the goal to become a carbon neutral country by 2021. Living Forest clearly attributes to this goal through the fact that CO_2 compensation is offered to the public, and thus the *carbon-neutrality discourse* was identified. The carbon-neutrality discourse comprises ideas and narratives that support the belief that climate change is caused by human intervention, and that part of the solution is to mitigate the effects of climate change by decreasing the amounts of carbon emissions in the atmosphere. This discourse is also reflected in the latitude of the program through the participant organizations. Several of these participant organizations have committed themselves to become the first carbon neutral organization in their field of work. In this sense the carbon-neutrality discourse is also supported by, and reflected in the choice for organizations as target audience. The last aspect that supports and reflects the carbon-neutrality discourse is the types of projects that are used by FONAFIFO to communicate the message of carbon neutrality. The seven projects that are assigned as carbon sequestration projects contribute to Costa Rica's goal to become carbon neutral.

The last discourse that was identified in Living Forest is the *certification and standards for credibility discourse*. This discourse is reflected in the choice of FONAFIFO to present seven sequestration projects as CDM certified projects, and as such are seen as an important "instrument" to create credibility. Furthermore FONAFIFO issues its own certificates which stand at the basis of both Living Forest and Clean Trip, namely the Certificates for Environmental Services (CSA's). In doing so FONAFIFO creates the sense of being credible and of a high quality towards participants, who can in turn use these certificates to demonstrate that they have donated their compensation money to a credible program.

4.1.3   Description of PAA Dimensions within Clean Trip
Actors and Coalitions within Clean Trip

As also for the above scrutinized Living Forest program, the initiator of Clean Trip is the Costa Rican government. Besides the fact that both programs share its initiator, it can be said that most of the actors within the Clean Trip program are also actors within the above described Living Forest program. The differences can be found in the target audience and consequently the participants. The partnerships within Clean Trip are the same as the partnerships within Living Forest, since both are FONAFIFO programs with the goal to compensate for CO_2 emissions and involve the same partners to support this[11]. The target audience for Clean Trip are individual travellers (being national or international) on international flights from and to Costa Rica. Originally Clean Trip is only offered directly by FONAFIFO, however –as mentioned in Paragraph 4.1.2- Adobe Rent a Car offers their clients to compensate for their emissions for US$2,- for the entire rental time through what they call the Clean Trip program. Budget Car Rental offers a similar compensation to its clients, although they refer to CSA and not to Clean Trip. Furthermore, as also noted in Paragraph 4.1.2, Nature Air is currently seeking for a way to offer additional compensation for their clients, but currently

---

[11] For a complete description of the partnerships see Paragraph 4.1.2, the section on Actors and Coalitions within Living Forest. An overview of all the partners is given in Table 4.1 Comparison dimensions within the Costa Rican Programs

compensates all the flights itself. In Clean Trips' year of initiation 2007, 211 passengers compensated their flight emissions and in 2008, 615 passengers compensated via Clean Trip (personal communication, Stein, 2009b; García as cited in Vargas, 2008), and García (personal communication, 2009) estimated at the time of research that the numbers for 2009 have not been influenced very much by the economical crisis and that the results will not be much different compared to the previous year. The number of 615 passengers resulted in the compensation of 2165 tons CO_2 emissions (Stein, 2009a). Relating back to the issue described above on the voluntary compensation that is offered to clients of car rentals, it is interesting to see that most organizations that compensate for their emissions with FONAFIFO, refer to Clean Trip as the program with which they compensated, but in reality this is not the case as, according to Garcia "only international flights from and to Costa Rica can be compensated with Clean Trip" (personal communication, 2009). Living Forest is the program with which the organizations can compensate for the domestically generated carbon emissions.

Resources within Clean Trip

All the resources that are available to Clean Trip are also available to Living Forest and the overlap of information is therefore not mentioned again in this section[12]. However, it needs to be noted that the financial resources obtained through the Clean Trip initiative that flow into FONAFIFO are, on the contrary to Living Forest and what participant organizations claim, not directly distributed to specifically aligned projects. Alberto Garcia from FONAFIFO notes that they have one big fund from where all the money is distributed to the PES projects, and that it is therefore not possible to assign a donation/payment through Clean Trip to a certain project or even a type of project (personal communication, 2009).

The knowledge distribution towards the public is mainly realized via the website and free publicity in the media. It was found that when looking for information on the website it is likely that a language barrier will rise for the non-Spanish speaking tourists, due to the fact that since January 2010 the website is no longer presented in English. The majority of tourists that visit Costa Rica come from the United States of America, Canada and Nicaragua (Business Monitor International, 2009), of which the first two countries are non-Spanish speaking countries and therefore a language barrier could be experienced by these and other non-Spanish speaking markets. Furthermore one can ask whether international tourists will become aware of the initiative, assuming that only a small part of the tourists will actively search for a way to compensate their CO_2 emissions when going on a holiday. All in all by having only a Spanish website FONAFIFO can miss a significant amount of international tourists that are not able to understand their website and therefore miss the information about the program. For more information on resources see section 'Resources within Living Forest'.

Rules of the Game within Clean Trip

The rules of the game within Clean Trip are slightly different on some aspects as they are within Living Forest. Mainly when it comes to the ways to enter the program as a participant and the contracts that are involved the differences can be found. For information about ways to enter the program as a receiver of financial support, see Paragraph 4.1.2 section 'Rules of the Game within Living Forest'. A participant for Clean Trip can go to the compensation calculator on the website of FONAFIFO where he or she needs to enter the location of departure and destination, and for how many passengers the compensation needs to be calculated. The webpage will give an estimated amount of emissions to be compensated and the price for that. FONAFIFO calculates US$5,-

---

[12] For information on resources see Paragraph 4.1.2 section Resources within Living Forest

(€3.65[13]) per metric ton of CO_2. On the next webpage the participant should select whether he/she is a resident of Costa Rica, since compensation via FONAFIFO is tax deductible, and there is some space to leave a comment. After this is all completed the participant can enter his/her personal data such as name, address etc. and the procedure should be rounded up by the actual payment information. This last phase of the procedure however, did not function when tested. There are no contracts involved for the participants of Clean Trip, since the payments can only be done per flight and on the initiative of the traveller himself. Information on quality control can be found in section 'Rules of the Game within Living Forest'.

Discourses in Clean Trip

The discourses that were found in Living Forest mainly apply to Clean Trip as well, due to the fact that both programs are run by the same governmental institution with the only differences being the target audience that is addressed and the fact that the participants within Clean Trip do not have the possibility to give a preference on where they would like their money to be invested. The latitude of Clean Trip is small due to FONAFIFO's choice to address individual travellers who are not given the possibility to chose an area in which they would prefer their compensation money to be invested.

4.1.4   Green Your Trip

Green Your Trip is a private initiative that has been set up by Laura Lang in 2007 in order to combat climate change through reforestation/afforestation and along with that compensate CO_2 emissions. Laura Lang has worked for Control Union Certifications as a representative for Costa Rican clients since 2004 and furthermore as a freelance inspector in the organic foods industry (Ashoka, 2009). The program has initially been set up as the Program for Allies in Climate Change (translation for Programa Aliados del Cambio Climático) and still serves as the administrational entity behind the new name for the program which since recently is Green Your Trip. The program's mission is to make it easier for the general public to do something to decrease the negative impacts of human activities on the planet and to shift the current focus for carbon sequestration as a governmental and 'rich men' issue towards the general public and smaller businesses. With this initiative Lang hopes to include the less influential individuals and businesses in Costa Rica and to make CO_2 compensation more popular and accessible for everyone (Ashoka, 2009).

Actors and Coalitions within Green Your Trip

The program was set up as an alliance with a private company, a state university (in which two academic institutions are represented) and a network of NGO's (both national as international). Concrete these operational partners are: Program for Allies in Climate Change, that coordinates the program led by Laura Lang; the Atmospheric Chemistry Laboratory of National University, which calculates the carbon emissions; the Institute of Forest Research and Services of the National University, which handles the reforestation; and Control Union Certifications, which issues the carbon-neutral certifications (Ashoka, 2009). These partners can also be seen as strategic partners since working together with them also provides the program with eligibility. Besides the initial partnerships over time there have been established new operational partnerships with the following organizations: Grupo Soluciones Informáticas (GSI), who will provide chips for trees in order to be able to monitor and trace the trees through the internet which will be launched in 2010 (Ashoka, 2009). New strategic partnerships were found with Corcovado Foundation and ICE (Costa Rican Electricity Institute) (Programa de Aliados Cambio Climático, 2009). The projects are executed by the aforementioned Institute of Forest Research and Services of the National University or by the participants themselves, who can chose to plant their own trees. Therefore the only partnership on

---

[13] Price is based on the Interbank exchange rate for Monday, February 8, 2010 and inclusive tax

behalf of the projects that can be distinguished is the partnership with National University of Costa Rica. This is very interesting since the same (governmental) organization is also involved as being an operational and strategic partner, and implies the strong influence of the government through this specific university.

The program is focused mainly on national businesses (some are based in CR but are in fact international) and car owners, and international tourists. The tree planting is both nationally and internationally orientated (Latin American region). The initiator Laura Lang envisions the program to widen its scope and to become more international within the coming years (Ashoka, 2009).

Green Your Trip is only offered directly by the Program for Allies in Climate Change (PACC) without the intervention of intermediate organizations. In the past BAC Credomatic offered CO_2 emission offsets through PACC to its clients as one of the financial products, but since January 2009 PACC was pushed aside and the bank claimed it towards the public as being their system (Ashoka, 2009). The numbers of participants, being both individuals and organizations are not very high seeing that in 2007 28 participants compensated with Green Your Trip and consequently raised US$40.000 of which 6.500 trees could be planted, in 2008 78 participants allowed Green Your Trip to plant 35.000 trees, and in 2009 61 participants compensated their emissions, but the financial results and amount of trees planted is unknown (Ashoka, 2009; Programa de Aliados Cambio Climatico, 2009)[14]. It has to be noted that in data offered on the website of PACC there is a group of participants of which it is not presented in which year they have compensated, and are therefore not included in the numbers above. Furthermore participants are named as individuals and as organizations/businesses, where in some cases it is not clear whether an individual is the representative of an organization/business or acts on only his/her behalf. And lastly the information does not correspond with the figures given by Ashoka. All in all it can be concluded that the digital data that is presented on the PACC website is not very trustworthy, but it is assumed that the data on participants and projects is reliable and since this file is mainly used to identify the participants and projects, and being it the only source on these issues it is nevertheless used for that purpose.

The mutual relation between Green Your Trip and the FONAFIFO mechanisms can be found on different aspects. The main aspect evidently is competition, but despite of this competition there are several organizations that compensate with both Green Your Trip and FONAFIFO's Living Forest. This will be further discussed in more detail in the next chapter where the actual comparison of the programs will take place. The Green Your Trip program is critical on FONAFIFO's work and criticizes it mainly on their use of exotic tree species. The ACC program emphasizes their way of working as being different from that of the FONAFIFO programs in that they only select native and endemic tree species for their forestry projects. When selecting trees the Institute of Forest Research and Services of National University seeks for the most suiting tree species for each specific patch of land and makes sure that each tree is taken care of for three years. Furthermore the trees are selected on whether they will attract fauna and whether they can provide economic value for the local farmer, who has to agree to replant a new seedling when the mature tree is cut down (Ashoka, 2009).

Resources within Green Your Trip
Ashoka provides Green your Trip with additional financial resources for the period of three years (personal communication, Lang, 2010). According to Ashoka's website the program is a so called 'Ashoka Fellow' since 2008. The projects in which the collected money is invested, or better the

---

[14] For a complete overview of participating organizations see Annex 7: Participating Organizations Green Your Trip

locations were the trees are planted are mostly fincas that belong to the National University of Costa Rica (UNA). How much of the invested money flows directly into the projects has not been found, but since several of the participants (donators) are also the landowners where the trees are planted, it can be carefully assumed that those receive 100% of the invested money as being trees to plant. Proof for this however, was never found and can therefore not be claimed as the truth. Only 7 out of the 29 Costa Rican locations are small fincas (the others are owned by the UNA) of which 4 are owned by one of the investors itself. In the latter case it was found that they plant their own trees on their own land, which is confirmed by one of the respondents who uses Green Your Trip to compensate for the CO_2 emissions that are caused by tourists that stay at his ecolodge.

Currently Green Your Trip only offers compensation through the planting of native tree species, but the aim is to include other types of projects such as recycling, sustainable agriculture, and alternative energy sources in their portfolio by 2012.

Most of the national project locations are situated in the province Heredia with an amount of 10 projects, of which 8 are on properties of the Costa Rican University. The provinces of San José, Limón, and Alajuela host 5 projects each, of which 5 are based on UNA property and 4 owned by its donator[15]. All in all it was found that only around 30% of the money is invested in land of independent landowners. Additionally there have been trees planted outside of Costa Rica in Panamá, Nicaragua, El Salvador, Guatemala, Honduras, the Dominican Republic, Trinidad and Tobago. Green Your Trip bases its choices for project locations on strategic ecological priority and the priority areas are locations that contain watersheds, the need for soil regeneration, biological corridors, and important biodiversity. The first two criteria are pointed out as being the most important ones in selecting a planting area. Another criteria is the proximity to educational centres or cities in order to enhance the accessibility for volunteers (Programa de Aliados Cambio Climatico, n.d.-a).

There are different ways used by PACC to convey their message on climate change and their program as a means to address the issues of global warming by carbon sequestration. One of these ways are informative presentations at schools and companies. This year an educational initiative will be launched that is based on selling the eco-sticker for cars and is taken together with the National Bank of Costa Rica and ICE with the aim to provide an educational facility for citizens (email communication, Lang, 2010). Also the national media is used to communicate the message to the general public (Ashoka, 2009). There was no information found on how the receivers of support obtain knowledge about climate change and how they can contribute to address the problems that go along with that. It can be assumed, however, that prior to knowing the program and becoming part of it as a receiver of financial support, the receivers obtain knowledge about the program through the above mentioned methods that are used by the program to convey their message. Furthermore, as stated above, many of the landowners that receive trees in order to be planted on their land are participants in the program as donator and therefore are already informed about the program and its goals.

When investigating the issue of decisional power it was found that the initiator and director of the program, Laura Lang, takes the majority of the decisions and with issues where other partners are involved, decisions are taken as agreements are reached (email communication, Lang, 2010).

---

[15] For a complete overview of the projects see

Annex 8: Project Locations Green Your Trip

Seeing that the national state university plays a very large role in the program, it can be assumed that they have a large influence on the final decisions that are taken by the director of the program.

Rules of the Game within Green Your Trip

As mentioned earlier, there are three target audience that Green Your Trip addresses. For each of these target audience there are different ways to enter the program as a buyer of emissions. Companies can get in touch with the program via email, telephone, fax, or classic mail. The first step is that the footprint will be calculated, secondly the number of trees needed to compensate for the footprint will be calculated, lastly the costs for planting and caring for trees that have to be planted is calculated. The participant organization 'buys off' its footprint for a period of one year at a time. As soon as the participant has donated the money it is asked to invite the suppliers of the company and to promote carbon compensation. If this is realized by the participant a direct donation as 'green gift' is done by the program itself in name of the participant. The last phase of the participation procedure is to participate in the actual planting of the trees. The company can choose to use the Climate Change Allies Program (ACC) seal or the Eco-car sticker that stands for the compensation of 5 tons CO_2 as a marketing tool. Vehicle owners can buy seals (Eco-car stickers) each year for $60 per vehicle and the average CO_2 emission per year is compensated through the planting of 11 trees (5 tons CO_2). And tourists can donate $10 for a 2 week trip to Costa Rica of which 1 tree will be planted and cared for and can consequently absorb 1 ton of CO_2 (Programa de Aliados Cambio Climatico, n.d.-a). For tourists/travellers the individual trip is compensated. None of the participant groups involve contracts (email communication, Lang, 2010).

In relation to the rules of the game for the receiver of the money/trees the applier signs a three year contract, in which issues such as maintenance, responsibility for planting etc. are recorded. Some of the donators have their own patch of land that they conserve and the money they invest in the program comes back to them in the form of trees that they plant on their land. The National University of Costa Rica is part of the program alliance and assumedly therefore receives a large part of the trees that are planted. It should be noted here however, that the 'receivers' do not receive money to conserve their patch of land, as with FONAFIFO, but the trees itself. Therefore it can be stated that this system does not support the receiver, but actually 'takes' land from them in order to plant the trees without providing any further economic benefit from this.

The calculation mechanism is based on international standards such as IPCC, and for the trees PACC works with a minimum average fixation per tree. In the case of cars that receive the eco-sticker two trees are planted for every ton of CO_2, which are absorbed during the growing process until maturity of the tree (email communication, Lang, 2010).

There are many different generators of CO_2 that can be compensated through the Green Your Trip program. The participant can compensate for ground, air and sea transportation, being it domestic or international; agricultural and livestock activities (including organic waste); business and industrial activities; and energy consumption (Programa de Aliados Cambio Climático, 2009). In order to ensure the quality of the program it is monitored nationally and internationally by respectively the UNA and the Corcovado Foundation as national organizations, and by Control Union Certifications and Ashoka as international organizations.

Green Your Trip is acknowledged by the national government as being supportive for the National Strategy for Climate Change (Ruiz and Musmanni in Programa de Aliados Cambio Climático, 2009). The compensation costs that are calculated by PACC are €7.31[16] per ton of CO_2 emissions

---

[16] Price is based on the Interbank exchange rate for Monday, February 8, 2010 and inclusive tax

and in this compensation no other greenhouse gasses are included. As presented in Text Box 4.2, it was calculated that Green Your Trip has a yearly average of 20.747 tons of compensated CO_2 emissions.

Text Box 4.1 Calculation Annual Average Compensation Green Your Trip

In 2007 28 persons 'planted' 6.500 trees which counts for 232 trees per person (6.500/28=232).
In 2008 78 persons 'planted' 35.000 trees which counts for 448 trees per person (35.000/78=448).
Taking the number of trees planted per person of both years, would give 680 trees in two years per person. Dividing the 680 by 2 years would give an average of 340 trees planted per person per year (232+448=680/2=340). This would mean for the year 2009 –of which only the number of participants is known- that the number of persons (61) needs to be multiplied by the average amount of trees (340) that is planted per person in order to calculate the number of trees that are assumedly planted in 2009 (61x340=20.740).
Taking all the yearly planted trees together and divide them through the 3 years will provide for the average amount of planted trees per year (6.500+35.000+20.740=62.240/3=20.747).
Given the fact that Green Your Trip calculates with one tree to compensate for one ton of CO_2, it was found that the program has a yearly average compensation of 20.747 tons CO_2 emissions.

Discourses in Green Your Trip

Green Your Trip is a private initiative that mainly runs on the idea that climate change should be battled and that planting trees is the means to do so. This reflects two discourses at the same time. The first discourse is the *discourse on carbon neutrality*, and the second is the *forests for climate compensation/sequestration discourse*. The first one is additionally supported by the fact that the calculation system that is used by the program is based on the IPCC guidelines. The second discourse is somewhat less present due to the plans to include renewable energy projects in the program's portfolio, which indicates that not only the sequestration of carbon dioxide is seen as important, but also the avoidance of generated carbon emissions. This supports the idea that carbon neutrality should be reached by using both the means of decreasing the carbon emissions in the atmosphere and sequestering the remaining emissions that could not be avoided. The avoided emissions that will be realized through the energy projects reflect another discourse, which is the *energy projects for climate compensation discourse*. But since these projects are not yet included in the program this discourse is not yet very much represented in Green Your Trip. The legitimacy that is derived from the National Strategy for Climate Change also reflect that Green Your Trip supports Costa Rica's goal to become carbon neutral by 2021, and consequently the carbon-neutrality discourse.

Another discourse that has been identified in Green Your Trip is the *sustainable development discourse* with a focus on ecological sustainability. This is reflected through the organization's aim

"(...) to spread Eco-Literacy and promote environmentally responsible ways of living, offering all people a practical option to compensate for their greenhouse gas emissions." (Programa de Aliados Cambio Climatico, n.d.-b para. 1).

The last discourse that was identified in Green Your Trip is the *certification and standards for credibility discourse*, which is reflected through the fact that the program is monitored and controlled by several national and international organizations of which one is a globally acknowledged certification entity. What is interesting about the choice of these organizations is that none of them is linked to the entities on climate change and –compensation. Another interesting finding that reflects this discourse is the fact that the program issues its own certificates and eco-stickers in order to let the participants show their involvement in carbon compensation. It this sense the program tries to profile itself as a credible carbon compensation program that 'owns' the right to issue such certificates.

4.1.5 Climate Conscious Travel

Climate Conscious Travel is the newest initiative that has been established as an agreement between CANAECO and FOFAFIFO in October 2009 on the I International Conference Planet, People, Peace. The program is designed to increase the amounts of carbon to be sequestered every year by offering tourism related organizations the option to share the costs of CO_2 compensation when compensating with FONAFIFO's programs. Therefore it cannot be seen as a compensation program in itself, but as an instrument to support Clean Trip. The initiator of the initiative, Jürgen Stein from CANAECO started with the idea for this program due to the meagre results of FONAFIFO's compensation program. According to Stein "The problem with voluntary carbon offset programs is that they are voluntary" (personal communication, 2009b) and therefore the results are not as good as they can be. With this problem in mind the idea raised that when the responsibility to compensate could be shifted from the individual traveller, who currently has to pay the whole sum for compensation, to the tourism industry and share the costs among the involved providers of a holiday package. Each provider would pay its part of the price it would cost to compensate for the flight to Costa Rica. As a calculation example the costs of a flight from the Netherlands to Costa Rica will be taken (see Text Box 4.2). As noted earlier, the costs for compensating are set by the government on US$5,- per metric ton CO_2 emissions, for a flight from the Netherlands to Costa Rica it is calculated that 5 metric tons of CO_2 will be generated and therefore US$25,- is needed to mitigate the flight emissions. Saying that the average length of stay is 14 nights and 15 days the division can be made as follows when taking three service providers into account. The US$25,- is divided by the 3 service providers and by the 14 nights of stay, which would result in costs per provider of US$0.60 per person per night. In this way each provider would pay US$8.40 for a tourist flying from the Netherlands to Costa Rica and a stay of 14 nights. In reality many tourists do not stay in one accommodation for the whole length of stay and therefore the accommodation provider calculates the amount of nights the tourist stayed in his accommodation and consequently only pays for these nights.

Text Box 4.2 Calculation Example for Sharing Compensation

$25 / 3 service providers / 14 nights = $0.60 per person per night

By sharing the costs for compensation Costa Rica should be able to increase the compensated amounts of CO_2 that are generated by international flights to and from Costa Rica. The aim of CANAECO is to plant 400.000 trees each year and consequently sequester approximately 800.000 metric tons of CO_2 (personal communication, Stein, 2009b). In comparison to the in 2008 and 2009

achieved results of FONAFIFO's current program system (2165 metric compensation tons of CO_2 emissions through Clean Trip), this would mean an increase of 797.835 metric tons of compensated carbon emissions per year. One of the main critics towards this system that were raised at the conference is that the tourist himself is not actively involved in the compensation anymore, as is the case for the individual traveller who chooses to go to FONAFIFO's website and fill out the application for compensation. In opposition to this it can be noted that the participant organizations that have already implemented compensation in their policies do not actively involve the tourist in the compensation effort either. Clearly it is important to involve the tourists in the compensation, and to create awareness on the need to compensate for CO_2 emissions the second development phase of Climate Conscious Travel will be directed to awareness creation and involvement among the tourists.

Discourses in Climate Conscious Travel
The CANAECO instrument that will be used by FONAFIFO in order to enhance participation in Clean Trip is not as far developed yet to identify all the involved actors, their coalitions; the resources; and rules of the game, but the instrument does have a very strong potential to influence all these dimensions. It gives rise to a very strong discourse and as such influence the other three dimensions in the FONAFIFO compensation programs. The discourse that has been identified within this instrument is based on the aspect that it only allows FONAFIFO the use of native tree species. This is a *nature conservation discourse* that sees the use of native and endemic tree species as vital for the protection of Costa Rica's abundant biodiversity. In taking this position Climate Conscious Travel has changed the rules of the game that indicate how the game is played and consequently strongly institutionalized their vision in the policy arrangement of climate compensation in Costa Rica. The program also reflects the *carbon-neutrality discourse* through the fact that it has been set up in order to increase the amounts of CO_2 emissions to be sequestered and as such contributes to the carbon-neutrality goal of the Costa Rican government. What is interesting, however, is that at the same time that it supports the latter discourse, the program moves away from the polluter pays discourse as it does not place the responsibility with the polluter himself (the tourist who flies to Costa Rica), but shifts this responsibility to the service providers.

Table 4.1 Comparison dimensions within the Costa Rican Programs

		Clean Trip	Living Forest	Green Your Trip
		Costa Rican Climate Compensation Programs		
Actors	*Initiator(s)*	Government	Government	Alliance private- (national and international), governmental organizations (national), and NGO's (national and international)
	Shareholders	—	—	No information available
	Strategic/financial Partners	Governmental (national and international), private (national), and public (national and international)	Governmental (national and international), private (national), and public (national and international)	Private (national and international), governmental (national), and NGO's (national and international)
	Operational Partners	Indirect partners: governmental (national)	Indirect partners: governmental (national)	Governmental (national), private (international), NGO (international)
	Project Partners	—	—	Governmental
	Target audience	Individuals, businesses, organizations	Individual travellers	Individuals (travellers and others), businesses, organizations
		National and international	National and international	National
	Intermediaries	Budget Rent a Car	Adobe Rent a Car	—
	Individual Participants	No information available	2007: 211 2008: 615 2009: estimated around 615	2007: 16 2008: 53 2009: 19 (2 persons were mentioned twice, these are only included once in this number)
	Participant Organizations	Since initiation 49, of which 15 tourism related	—	2007: 12, of which 5 tourism related 2008: 27, of which 11 tourism related 2009: 41, of which 18 tourism related
	Mutual Relation	Directly related to Clean Trip; in close future related to Climate Conscious Travel; competition Green Your Trip	Directly related to Living Forest; in close future related to Climate Conscious Travel; competition Green Your Trip	Competition Living Forest and Clean Trip. Heavily criticizes competition for using non-native tree species
Resources	*Sources of Finance*	National: Eco/fuel-tax, selling CSA's through Living Forest	National: Eco/fuel-tax, selling CSA's through Living Forest	National: selling eco-stickers, green postcards, compensation donations
		International: Bio-Carbon Fund from World Bank (US$ 2.207 million), GEF, Conservation International, and Equator. Selling CSA's through Clean Trip, and Agua Vital. Selling Carbon Credits	International: Bio-Carbon Fund from World Bank (US$ 2.207 million), GEF, Conservation International, and Equator. Selling CSA's through Clean Trip, and Agua Vital. Selling Carbon Credits	International: Ashoka
	Division Finance %	100% goes to local farmers	100% goes to local farmers	No data available
	Project Types	Forestry through environmental services	Forestry through environmental services	Reforestation with native tree species. Aim to include recycling, sustainable agriculture, and alternative energy sources by 2012
	Project Locations	National: sequestration projects divided over 4 provinces	National: sequestration projects divided over 4 provinces	National: divided over 7 provinces
		International: —	International: —	International: divided over 7 Latin-American countries

43

Rules of the Game	Knowledge Distribution	Towards target audience: website, free publicity in media	Towards target audience: website (Spanish), free publicity in media	Towards target audience: website, free publicity in media, informative presentations schools and companies
		Towards support receivers: general governmental actions, no further info available	Towards support receivers: general governmental actions, no further info available	Towards support receivers: no info available. Many of the receivers are also partner or donator
	Distribution Decisional Power	Large actor coalitions can influence decisions	Large actor coalitions can influence decisions	Actors can influence decisions
	Application Participants	Contact FONAFIFO → amount carbon compensated? → calculation FONAFIFO → pay compensation	Go to website → fill out location of origin and destination, and nr of passengers → calculation FONAFIFO → pay compensation	Individuals: Vehicle owners: buy Eco-Car sticker→ average carbon usage compensated with 11 trees
				Tourists: Contact PACC→ donate $10 for 2 week trip → 1 tree planted
				Organizations: contact PACC → amount carbon calculated → nr trees calculated → costs calculated → pay compensation
	Application Support Receivers	Contact FONAFIFO → submit forest management plan → plan approved FONAFIFO → adopt plan → receive payment → FONAFIFO monitors yearly, when approved → next annual payment	Contact FONAFIFO → submit forest management plan → plan approved FONAFIFO → adopt plan → receive payment → FONAFIFO monitors yearly, when approved → next annual payment	Contact PACC → sign contract
Rules of the Game	Contracts	Donator: Min 5 years + 1 hectare	Donator: No contracts	Organization donator: 1 year contract
				Individual donator: no contracts
		Receiver: Forest conservation → 5 years; Reforestation → 15 years; 50% in first year, 20% in second, 10% in following 3 years; Sustainable forest management → same as reforestation	Receiver: Forest conservation → 5 years; Reforestation → 15 years; 50% in first year, 20% in second, 10% in following 3 years; Sustainable forest management → same as reforestation	Receiver: 3 years for planting and maintenance.
	Calculation Mechanism	Based on IPCC	Based on IPCC	Based on IPCC
	Generators Compensated	Travel by car, boat, domestic air travel, all other tourism activities	International flights from and to Costa Rica	Travel by car, boat, and sea; agricultural and livestock activities; business and industrial activities; energy consumption

	Quality Control	National: Agronomic center of Tropical Agricultural reserach and education (CATIE), the National Forestry Board of Farmers (JUNAFORCA) and internal and external audits such as the General Controller of the Republic.	National: Agronomic center of Tropical Agricultural reserach and education (CATIE), the National Forestry Board of Farmers (JUNAFORCA) and internal and external audits such as the General Controller of the Republic.	National: University of Costa Rica; Corcovado Foundation
		International: For sequestration projects CDM Standards	International: For sequestration projects CDM Standards	International: Control Union Certifications; Ashoka
Rules of the Game	Laws /conventions	National: Forest Law 7575; 7174; Executive Order No.19886-MIRENEM; National Development Plan; National Forestry Development Plan; National Peace with Nature Plan	National: Forest Law 7575; 7174; Executive Order No.19886-MIRENEM; Nat. Dev. Plan; Nat. Forestry Dev. Plan; National Peace with Nature Plan	National: National Strategy for Climate Change
		International: Kyoto Protocol → CTO's and CER's (CDM); Millennium Development Goals	International: Kyoto Protocol → CTO's and CER's (CDM); Millennium Development Goals	International: no information available
	Tax deductible	Yes, for Costa Ricans	Yes, for Costa Ricans	No
	Payment systems	VISA and MasterCard	VISA and MasterCard	No information available
	Costs / ton emissions	€3.65	€3.65	€7.31
	Emissions compensated	CO^2	CO^2	CO^2
Discourses		carbon-neutrality discourse	carbon-neutrality discourse	carbon neutrality discourse
		forests for climate compensation discourse	forests for climate compensation discourse	forests for climate compensation discourse
		sustainable development discourse	sustainable development discourse	energy projects for climate compensation discourse
		certification and standards for credibility discourse	certification and standards for credibility discourse	sustainable development discourse
				certification and standards for credibility discourse
Effectiveness	Yearly average compensated emissions	No information available	2.165 tons in first year (2007/2008)	20.747 tons/year

4.2   Dutch Programs

In this paragraph the three Dutch compensation programs will be described. Firstly the background of the programs are given after which each program will be explained according to the four PAA based dimensions. Green Seat will be clarified first, after which Trees for Travel is being discussed and lastly a description of CO2ZERO will be given.

4.2.1   Green Seat

Green Seat is a private initiative by Niels Korthals Altes en Elise Allart (Schutten, 2005), that has been set up with the ambition to strive for a climate (CO_2) neutral world. Its mission is to make compensation for air travel easy accessible for every air traveller (Climate Neutral Group, 2009b). Green Seat fused with the Climate Neutral Group in 2007 that was initiated by a bank, an NGO and a fund for charity lotteries (Climate Neutral Group, 2009h). The initiative has a mainly national scope related to its target audience which are Dutch travellers and travel agencies, of which the latter are targeted as intermediaries between Green Seat and the travellers. The projects are based outside the Netherlands and thus represents an international scope in that line of activities (Climate Neutral Group, 2009a).

Actors and Coalitions within Green Seat

Green Seat is involved in two strategic partnerships in order to ensure its quality and credibility, which are the International Carbon Reduction and Offset Alliance (ICROA) and MVO Nederland (a Dutch platform for Corporate Social Responsibility, CSR). ICROA is an international private non-profit organization that sets high standards for CO_2 compensation and is committed to a transparent and qualitative compensation market (Climate Neutral Group, 2009j). MVO Nederland is a private non-profit knowledge- and network platform that helps private businesses in the Netherlands to strive for higher quality CSR goals and to accomplish these goals and practices.

Text Box 4.3 Shareholders Climate Neutral Group

Kegado BV 21,47%
Triodos Ventures BV 20,43%
Face Foundation 14,63%
DOEN Foundation 11,69%
Multatuli Travel BV 10,48%
Neous BV 10,48%
D.M. Slieker 5,93%
Drs. H.B. Markowski beheer BV 4,89%
Source: Climate Neutral Group, 2009g

As can be seen in Text Box 4.3, Green Seat, as being part of the Climate Neutral Group, has eight shareholders. Two of these shareholders are non-profit and together hold 26.32% of the shares, and the other 73.38% are held by commercial organizations.

On the operational level Green Seat has its partnership with the Climate Neutral Group, where Green Seat takes care of the compensation of air traffic generated emissions, and the Climate Neutral Groups holds all operations concerning all otherwise generated emissions. Furthermore, on the project level, Green Seat works together with NGO's such as the Face Foundation, which take care of the projects that are supported with Green Seat's compensation money.

An amount of 36 travel organizations offer Green Seat in one way or another to its clients. There are five different levels in which Green Seat is offered by these travel organizations. Green Seat has divided the organizations in the following levels[17]:

- Five star agencies, have Green Seat completely integrated in all their bookings;
- Four star agencies, have Green Seat as an option in booking procedure and compensation is based on kilometres travelled;
- Three star agencies, offer Green Seat as an option in booking procedure and compensation is based fixed prices;
- Two star agencies, offer Green Seat compensation as an option after the booking procedure;
- One star agencies, promote Green Seat in brochures, website, and or travel documents (Climate Neutral Group, 2009f, 2010a).

Through all those agencies and directly with the Green Seat website around 40.000 seats were compensated for in the year 2009. This number includes individual compensations directly through the Green Seat website and via the travel agencies that offer Green Seat as an option to their clients. The organizations that compensate for their trips mostly do so at the end of the (financial) year when their balances are made up and since at the time of research these numbers were not yet available, they are not included in the above mentioned amount of compensations. There are no specific numbers, but the spokesperson of Green Seat estimated that this number could be double the amount that is mentioned above (personal communication, Kersbergen, 2010). Of those organizations that compensated via Green Seat all Dutch ministries compensate their flight emissions through Green Seat, furthermore organizations such as Cordaid, TNT, ANWB, Ben & Jerry's, and Amnesty International compensate their emissions[18]. These are all clients of the Climate Neutral Group and most of these companies compensate for their flight emissions plus other activities.

The mutual relation between Green Seat and the other compensation programs is mainly based on competition. Green Seat sees itself different from the other compensating programs in that they use external and international certifications in order to deliver the highest quality of compensation projects. They are a member of ICROA (International Carbon Reduction and Offset Alliance) which is an alliance between international organizations that stands for strict and high quality standards for carbon sequestration. Furthermore Green Seat stands for transparency which is ensured amongst others by the annual review that is published on their website and the financial figures that are provided in these reviews is controlled by independent accountants. What makes Green Seat different from the other programs (CO2ZERO was named explicitly) is that Green Seat not only compensates for CO_2 emissions, but also for other greenhouse gasses that are produced with flying. Therefore they can claim to be climate-neutral instead of CO_2-neutral, which also reflects a discourse. Another distinguishing point is that the compensation option is offered as part of the booking procedure and is therefore easier for the clients to chose to compensate for their emissions. According to Van Kersbergen (telephone conversation, 2010) some of the travel agencies 'sell' up to 30% of their bookings with climate compensation. Furthermore Green Seat does not have a restricted amount of airlines of which the seats can be compensated, which means that every flight with every airline can be compensated for with the program. Green Seat claims to be leader on the Benelux market as a climate compensation program (telephone conversation, Kersbergen, 2010). In

---

[17] For a complete overview of the agencies that offer Green Seat see Annex 9: Intermediaries Green Seat

[18] For a complete overview of compensating businesses and organizations Annex 10: Participating Organizations Green Seat

2008 the Climate Neutral Group has booked a turnover of 2,80 million Euros which was about 50% more compared to the previous year (Climate Neutral Group, 2009j).

Resources within Green Seat

Green Seat does not only generate financial resources through the selling of carbon emissions, there are additional resources that are generated with consultancy, IT systems and calculating greenhouse gas footprint of organizations and companies. The division of financial resources is arranged in a way that 60% goes directly to the projects and the residue is used for awareness creation among public and improvement of technical systems for integration and calculation systems (telephone conversation, Kersbergen, 2010).

The projects developed by Green Seat/Climate Neutral Group are focused on renewable energy and forests (both reforestation and conservation of existing forests). With the forest projects they work closely together with Face the Future. All the projects should take social aspects into account as well. Positive contributions are directed to local employment, access to energy for locals, improvement of living conditions, improvement of health conditions, poverty reduction, and distribution of knowledge and technology (Climate Neutral Group, 2009g). The division of projects was as follows in 2008: biomass projects 43 percent, wind energy projects 15 percent, forestry projects 39 percent, and water energy projects 3 percent[19] (Climate Neutral Group, 2009j). Current Green Seat projects are situated in India, Malaysia, Thailand, Taiwan, Egypt, Brazil. A project in development is situated in Mexico. Former projects were situated in Thailand, China and New Zealand (Climate Neutral Group, 2009g). Only projects outside of the Netherlands and EU are being supported by the Climate Neutral Group (Climate Neutral Group, 2009d). In selecting new projects to support the CNG focuses on areas that so far have not benefitted sufficiently from the carbon market (Climate Neutral Group, 2009d).

The knowledge about climate change and carbon sequestration as a way to address global warming is distributed via several instruments. A lot of information is provided on the website. Furthermore information is provided through the travel agents and free publicity. Flyers are distributed to and by the agents and presentations are given to employees at the sales department in order to be able to inform their clients on climate change and Green Seat compensation. On the website of the Climate Neutral Group an Annual Review of 2008 can be found. Related to the projects the local people are trained and educated to work within the projects and the indirectly involved people at location are informed through various instruments.

The distribution of decisional power is arranged by Green Seat's shareholders. The Climate Neutral Group provides an overview of its shareholders, which could indicate something about the decisional power within Climate Neutral Group. As can be seen in the overview in Text Box 4.3, there are eight shareholders involved that have their say in the decision making within Green Seat.

---

[19] This information is based on the Climate Neutral Group as a whole, which means that there could be differences within Green Seat.

The shareholders with the highest shares have the highest decisional power. They have a say in the more general issues and can comment on the final results of the organization. The director has the final say about issues such as the vision and mission of the organization and decides on the direction the organization takes. The marketing employees decide on how communication and marketing is handled within the directions that are given by the director. Furthermore there is an interesting link to be seen between one of these shareholders and the above described actors and coalitions in Green Seat, as the Face Foundation with its share of 14,63%, is also one of the NGO's with which Green Seats works together in supporting the local projects.

Rules of the Game within Green Seat

In order to participate in Green Seat as a financial source, two divisions can be made related to the procedure. The first way is directly via the website of Green Seat. The costumer can go to the calculation mechanism and enters the location of departure and destination, where after the option for one-way or round trip compensation is offered. The costumer is also offered the choice to compensate for only the CO_2 emissions or all the emissions that are caused with the flight. With the last option the flight is 'neutralized' (Climate Neutral Group, 2009c). The second way is through travel agencies when booking a ticket/trip. As noted above there are five categories in which the compensation efforts of the travel agencies are divided. Only the three and four star agencies are relevant in this sense due to the booking option or promotion of Green Seat they provide for their clients as an integrated part of their booking procedure. In the case of five star agencies there is no need for action by the individual traveller to compensate emissions with Green Seat given that these agencies offer Green Seat not as an option but as a standard and therefore is already integrated in the price of the booking. And the two and one star agencies offer the possibility to go to Green Seats website and do the calculation directly with Green Seat, of which the procedure is described above. The three and four star agencies offer the client to tick the option for compensation with Green Seat as a part of their booking process. The client can also chose to compensate only for the carbon emissions or also for other greenhouse gas emissions that are generated with their flight. Independent of the instrument that is used to compensate with Green Seat, as soon as the payment is done the client receives a personal Green Seat certificate that declare the compensation effort of the client.

The Climate Neutral Group offers financial support to both projects and sellers of CO_2 credits. Only projects outside the Netherlands and EU can apply for support. For the time being only projects on renewable energy, energy efficiency, and energy production through waste can apply for support. Forest projects are currently not included in their portfolio. In order to apply for support there are several processes and procedures that the receiver has to go through, which are displayed in Text Box 4.4.

Text Box 4.4 Procedures and Processes Project Application Green Seat

a. A Carbon Feasibility Assessment will be done in order to evaluate the project on certain criteria;
b. Contracting carbon credits: this can be done through flexible pricing mechanisms or already existing carbon credits with fixed prices. The last option is only applicable for projects that are developed under the CDM, Gold Standard or Voluntary Carbon Standard (VCS);
c. Developing financial models and business plans. CNG assists in doing this;
d. Project preparation according to the rules and standards through a baseline study, developing a Monitoring and Verification Plan (MVP), and developing a Project Design Document (PDD);
e. Verification and registration of the project;
f. Post-registration: monitoring, verification and issuance of the carbon credits (Climate Neutral Group, 2009d).

Green Seat seeks not only for sustainable solutions for climate change, but also for sustainable relations with their projects and clients. Therefore there are always contracts involved with both the projects and business/organizational clients in order to know from each other where they stand and what they can expect from each other. Contracts with projects mostly involve a 4 to 5 year period. In this period Green Seat will provide them with the financial support and knowledge in order to get the project going. One of the criteria is that the project wouldn't have been able to start without the support of Green Seat. The contracts with business/organizational participants involve 2-3 years depending on what the participant in question wants. Green Seat does expect a willingness for a sustainable relation/support from their participants in order to be able to offer sustainable relations and support to the projects as well. The individual traveller compensations do not involve any type of contract since the compensation is done per flight.

Green Seat focuses on by air travel generated emissions, whereas the Climate Neutral Group, of which Green Seat is part, offers compensation for every type of emissions. The Climate Neutral Group is mainly focused on organizations, while Green Seat focuses more on individual travellers (telephone conversation, Kersbergen, 2010). For calculating the generated emissions the UNEP Greenhouse Gas Protocol is used in order to make sure that everything is calculated according to international standards. In order to ensure the quality of Green Seat the projects that are supported, and credits sold by the CNG have to meet high international standards such as the Gold Standard (GS); the Voluntary Carbon Standard (VCS); the Clean Development Mechanism (CDM) Standard and; the Climate, Community and Biodiversity Standards (CCB, only complementary with CDM of VCS forest projects). The objective is to mainly use the Gold Standard since this is the highest quality standard of all (Climate Neutral Group, 2009i). All projects are verified and certified by independent organizations chosen by the United Nations Framework Convention on Climate Change (UNFCCC). Furthermore all the credits that are sold by the CNG are registered with several international independent registers (Climate Neutral Group, 2009e). Division of projects according to certification standard: Voluntary Carbon Standard 67 percent, Gold Standard 6 percent, CDM 24 percent, other 3 percent [20] (Climate Neutral Group, 2009j). Nationally the program is financially

---

[20] This information is based on the Climate Neutral Group as a whole, which means that there could be differences within Green Seat.

monitored by BDO CampsObers Audit & Assurance, which is a Dutch accountancy agency that is a member of the BDO international network for internationally working accountants.

Green Seat legitimizes itself through the international agreement of the Kyoto Protocol. On a national level no regulations, laws, and agreements were found to be used by Green Seat in order to legitimize their efforts of encouraging climate compensation towards the public. The payments of €11.90 per ton of CO_2 or CO_2-equivalents can be done through VISA, MasterCard, standard transfer through the bank, and iDEAL. iDEAL is a secured internet payment system that is offered by most banks in the Netherlands.

Discourses in Green Seat

It was found that the discourses within Green Seat address issues that involve the current state of the planet. There are four discourses that are equally present in Green Seat, which are the sustainable development discourse, the climate neutrality discourse and the certification and standards for credibility discourse.

The discourse that is institutionalized the most in Green Seat is the *sustainable development discourse*. This discourse was found in the choice of type of projects in which the compensation money is invested. In the renewable- and sustainable energy projects sustainable development is an integrated part where the facilities and infrastructure that have to be developed represent economic-, social-, and ecologic sustainability. Economic sustainability is important because the project facilities should provide economic benefit, and ecological sustainability is represented in the fact that the project facilities provide energy that is produced in a sustainable manner in order not to be harmful for nature. Green Seat's ideas about sustainability are also reflected in the relationships between them and the support receivers. Green Seat works with contracts that connects them with projects for five years. Also the social aspect of sustainability is taken into account in the choice of projects by Green Seat. This is done through the use of certain social criteria to which all the projects have to comply. These criteria are that the project has to provide a positive contribution to local employment, access to energy for locals, improvement of living conditions, improvement of health conditions, poverty reduction, and distribution of knowledge and technology.

The *climate neutrality discourse* relates to issues that have to do with the compensation of all greenhouse gasses that are generated with human activities. It was found that the idea of climate neutrality is reflected in the latitude of the program, which is consequently represented by the fact that Green Seat has chosen to offer not only compensation of CO_2 emissions, but also the other greenhouse gas emissions that are generated with human activities.

The third discourse that was identified is the *certification and standards for credibility discourse*. Within this discourse standards and certification are seen as important features to ensure the public that the services or products that are delivered are of a high quality and that they meet the highest standards, and as such are credible. The products or services are attributed to external monitoring by independent organizations who are acknowledged to ensure high quality. Within Green Seat this is reflected by the partnership with ICROA, which ensures that Green Seat complies to the high compensation standards that are set by this international alliance. Furthermore the projects with which Green Seat works are all externally monitored and certified by the standards that are set by the Kyoto Protocol.

A last discourse that was identified through the types of projects that are supported by Green Seat is the *energy projects for climate compensation discourse*. Green Seat currently only has

energy projects in its portfolio, and consequently reflect their believe in energy projects as a means to mitigate climate change.

4.2.2   Trees for Travel

Trees for Travel is a non-profit private initiative that has been set up as a charity foundation and as such acknowledged by the Dutch government. The organization is comprised of an independent board of trustees which includes field experts from the travel industry, ecology, forestry, marketing etc. (Trees for Travel, 2010a). Trees for Travel has been developed with the goal to reduce CO_2 emissions and compensate for the remaining emissions, and to create awareness on climate change/global warming and include social aspects such as creating long-term local employment and income (Trees for Travel, 2010a). The core activities of Trees for Travel are based on giving financial support to local sustainable development projects and the money that is being collected through the compensation for CO_2 is used in order to pay for this financial support (telephone conversation, De Ligt, 2010a).

Actors and Coalitions within Trees for Travel

As can be seen in Table 4.2, there are strategic partnerships that provide Trees for Travel credibility such as memberships with national and international networks and the official acknowledgement by the Dutch government for being a charity foundation from ANBI. Skil-Shimano is an international cycling team that has become the ambassador for Trees for Travel, and as such provides for international promotion of Trees for Travel. Furthermore Trees for Travel works together with project partners on the local project level. Most of these project partners are Dutch and work together with local NGO's on site in order to enhance local involvement and participation, and are consequently indirect partners of Trees for Travel, but since there is no direct partner relationship these are not mentioned here. Lastly there are operational partners with whom Trees for Travel works together in order to either enhance awareness on the need for climate compensation or to increase participation in climate compensation (personal communication, De Ligt, 2010b).

Table 4.2 Partners Trees for Travel

Strategic Partners	Project Partners
Climate Partners [non-profit]	Face Foundation [non-profit]
Hier [non-profit]	Royal Tropical Institute [non-profit]
Een [non-profit]	More Trees Consultancy
Save our Climate [non-profit]	Sicirec [partly non-profit]
Skil-Shimano	
ANBI [governmental]	
IDUT [non-profit]	

Source: (Trees for Travel, 2010c http://www.treesfortravel.nl/)

Trees for Travel has a very broad Target audience and as such targets individuals (travellers and others), businesses, governments, and travel agencies as intermediaries towards individual travellers. The website is provided in Dutch and English and Trees for Travel also has a Belgian website in order to operate not only nationally, but also internationally.

Currently forty-six intermediaries, inter alia, Activity International and Thika Travel, offer climate compensation through Trees for Travel[21]. However, only three of these are listed by Trees for Travel as participant organizations that compensate for their own greenhouse gas emissions with Trees for Travel. This could be interpreted as green washing, as it seems that these organizations want to use the Trees for Travel logo and show their involvement with climate compensation in order to improve their image, while in the mean time they are not taking their own responsibility to compensate their own emissions. In 2007 approximately 450 individual participants have compensated their emissions, whereas in 2008 this number has doubled with roughly 1060 participants, and 2009 counted around 1135 individual participants[22]. The participant organizations that have compensated through Trees for Travel are on a yearly basis counted around 120 (email communication, Van Diepen, 2010a). Currently there are 142 participant organizations that compensate their greenhouse gas emissions with Trees for Travel[23]. These participant organizations count for around ninety to ninety-five percent of the overall compensated emissions at Trees for Travel, with the remaining five to ten percent for the individual participants.

The mutual relationship with the other compensation programs is mainly competition based. Trees for Travel sees itself differently from the other programs in that the other initiatives just buy CO_2-equivalents (CO_2-e) credits and always seek the best price for these credits (telephone conversation, Van Diepen, 2010b). Trees for Travel however, has its own projects since 2007 and always seeks for the best option for both the environment and local people. In this way they guarantee that they, as one of the few, invest the donated money in sustainable development and in that way contribute to the Millennium Goals (telephone conversation, Van Diepen, 2010b). Trees for Travel is also seen as different from all the other programs because it is a charity foundation, and as such is a non-profit NGO (telephone conversation, Van Diepen, 2010b).

Resources within Trees for Travel
The main financial resource of Trees for Travel is obtained through the compensation of CO_2-e. Additional income is obtained through the following resources. In the past Trees for Travel has received three subsidies from the government. The first subsidy was assigned to the business plan of the program in the initial phase, as was a subsidy in order to communicate the message on climate compensation and the role of Trees for Travel as a compensation program. Lastly a subsidy was provided in order to enhance the involvement and participation of people that are active in the supported projects in the certification processes to get carbon credits (personal communication, De Ligt, 2010b). These subsidies, however are only incidental and logically do not provide for a constant income. Furthermore De Ligt (personal communication, 2010b) does not expect to receive any more subsidies in the future. As another additional source of income Trees for Travel receives money through an aligned initiative that is called Trees for All. In this initiative Trees for Travel offers non-certified emission reductions that are less costly due to the fact that they are not part of the certification procedures of CDM and therefore more trees can be planted with the same amount of money (Trees for Travel, 2007). The participants invest their money directly in the planting of trees in a certain area, and Trees for All takes care of the planting and maintenance of the trees (Trees for Travel, 2007). How much additional financial resources this generates for Trees for Travel is not known, but since the money that comes from Trees for All is invested directly in the planting of trees, it does not contribute to the other projects that Trees for Travel supports, and which offer certified emission reductions. Trees for Travel invests at least 75% of the donated money in the

---

[21] For a complete overview of all the intermediaries see Annex 13: Intermediaries Trees for Travel
[22] These numbers are based on calculations from average numbers that were provided by Trees for Travel
[23] For a complete overview of all the participating organizations see Annex 14: Participating Organizations Trees for Travel

projects, but aims to achieve an average of 80% with the residue of respectively 25 and 20 percent being needed to cover overhead costs (Trees for Travel, 2009; telephone conversation, Van Diepen, 2010b).

The projects Trees for Travel invests its money in are forestry-, preservation-, and renewable/sustainable energy projects. As can be seen in Text Box 4.5, there are currently ten projects included in the Trees for Travel portfolio, with a focus on Asia, Latin-America, and Africa. This focus is chosen in order to be able to help marginalized people in developing countries that suffer the most from climate change (Trees for Travel, 2009). The knowledge distribution on climate change and Trees for Travel's activities to decrease the negative impacts of this climate change towards the Target audience is mainly done through the website and intermediaries. In addition there is a lot of free publicity in the media that helps Trees for Travel to convey their message. Taking the (potential) receivers of support into account; the local population at the project locations is included as part of the projects. In order to include these people workshops, training and educational courses are given. Locals can thus receive training in order to become educated about their environment and the best ways to live in a sustainable manner of this environment. The distribution of knowledge at the project locations, however is handled by the local organizations with whom Trees for Travel and it's project partners cooperate (telephone conversation, Van Diepen, 2010b).

The board of directors, as can be seen in Text Box 4.6, has 6 members from 3 different disciplines. The board has the final say and is responsible and accountable for the decisions made.

1. Volcano reforestation in the Philippines (in corporation with PAMB (Protected Areas Management Board, Central Mindanao University –CMU- and Iligan Institute of Technology van de Mindanao State University -MSU-ITT-, and two former employees of Alterra);

2. Protecting and regenerating rainforest in Malaysia (in corporation with Infapro and the Yayasan Sabah Foundation);

3. Sustainable energy in Cambodia (project from Hivos Klimaatfonds in corporation with SNV and the Dutch Ministry of International Affairs –DGIS-) ;

4. Sustainable energy in Tanzania (project from Hivos Klimaatfonds in corporation with TaTEDO - Tanzania Traditional Development and Environment Organisation-);

5. Recovery of two national parks in Uganda until 2006 (this project was initiated by IUCN and the Uganda government and supported by Trees for Travel.). In 2006 the local farmers had cut down some hectares of the planted forest and made Trees for Travel to chose a new direction in which the local population should always be taken into account. Whithout their support, it couldn't work and as Trees for Travel states "The interests of the local population should be the interest of the project" (Trees for Travel, n.d.);

6. Shrub planting and biodiesel with Jatropha (climate nuts) in Burkina Faso (Project from FEPPASI - Provincial Federation of professional farmers in Sissili- and Malibiocarburant);

7. Shrub planting and biodiesel with Jatropha (climate nuts) in Mali (in corporation with KIT the Dutch Tropical Institute);

8. Protection of ecological corridors in Bolivia (in corporation with Bolivian foundation Cetefor via the Dutch organization Sicirec);

9. Forestry in Ecuador (in corporation with Face Foundation) This project is not part of the current portfolio anymore. Face Foundation initiated Profafor - Programa Face de Forestácion- which is a national organization that administers the projects and is a PES mechanism;

10. Sustainable energy in Guatemala (project from Hivos Klimaatfonds in corporation with Fundación Solar).

Board of Directors Trees for Travel:

drs. ing W.R.G. Hagedoorn – Chairman (Marketing Expert);
ir. J. Bos – Member (Civil Servant Environmental Policy);
drs. A. Brouwer – Member (Communication Advisor);
H.A.F. Brouwer – Secretary (Travel Agent);
dr. ir. C. Geerling – Member (Forestry Expert);
ing. Sjaak de Ligt – Program Manager and Secretary of the Board.
   Source: (Trees for Travel, 2010c)

Rules of the Game within Trees for Travel

As within every organization also Trees for Travel knows its own formal and informal rules that govern the interaction between the different actors within the program. Unfortunately, no informal rules could be distinguished and the information that was found is all based on formal rules. One set of formal rules in the program are the rules for participation and the procedures one has to go through in order to become a participant or a receiver of financial support. For individuals (e.g. Travellers) an online mechanism is offered where the donor can chose three ways to compensate. Compensation for flight emissions: the donor has to fill out the destination, year, and amount of travellers of the flight on the homepage of the website and calculate directly what the emissions of a flight from A to B will be and how much needs to be paid accordingly. The second way is to click on the 'Climate Calculator' and chose the category of the emission generator to be compensated for. The last option is to donate a certain amount of money the donor chooses to donate. This can be done by transferring the money to the bank account of Trees for Travel or directly by clicking the button 'Doneer direct' [24].

Companies and travel agencies have to get in touch with Trees for Travel in order to come up with a customized plan in order to reduce emissions and to compensate for the remaining emissions. The procedure for companies is as follows: for reforestation projects two options are offered. One is to plant trees without certification through Trees for All (in this case the company pays per tree), and the other is to plant trees with certification through Trees for Travel (the company pays per ton of emissions that has to be compensated). With both options the planting is guaranteed and controlled[25]. The company has to provide Trees for Travel with an overview of the usage it wants to compensate, and subsequently Trees for Travel will offer the company a price quote and cooperation proposal, after which the contract can be signed according to the agreed wishes of the company and emissions will be compensated.

Travel agencies support Trees for Travel through one or more of the following options: 1). placing the Trees for Travel link on the website, after which Trees for Travel places a link of the travel agency concerned; 2). distributing folders and leaflets of Trees for Travel; 3). place the company stamp on the answering coupon in order to show Trees for Travel the response that is received through the travel agency; 4). placing informative texts about Trees for Travel in the brochure; 5). integrating compensation through Trees for Travel in booking procedure. Trees for Travel arranges the software and 10% provision is given to the travel agency. And lastly 6). digital and paper vouchers are offered that can be sold to the costumer (provision is offered for each sold voucher).

For the application for financial support Trees for Travel can approach a project with the offer to financially support them, but the projects themselves can approach Trees for Travel and apply for financial support as well. Firstly Trees for Travel sends its criteria to the project and in case that the project does not comply the criteria it has to improve in order to receive support. As soon as the project meets the terms of Trees for Travel issues such as the amounts of CO_2-e that will be sequestered through the project and how these results will be guaranteed. The so called 'Carbon Fix Model' is used to indicate the amounts of CO_2-e that can be sequestered by the project in question. Consequently the costs of the project will be calculated and Trees for Travel will provide financial support for a part of those costs from the compensation payments. This part is never more than 50% of the total costs. This is done in order to spread the responsibility and risks for the project. As

---

[24] The whole procedure is visualized in Annex 15: Online Calculation Procedure Trees for Travel
[25] More information about quality control will be given in the following paragraphs

soon as these procedures are completed a contract is signed and the financial support can be started.

There are different types of contracts involved depending on whether the contract relates to participation of organizations as donators, or applies to the application for financial support. Contracts with donating organizations are always set up in consultation with the company in question. Trees for Travel tries to work with periods of around three years. In the contract issues such as the amount of emissions to compensate for, the period of payments, the amount of payments and the amount of money that will be donated is drawn up.

The projects that apply for financial support involve contracts between 25-30 years. These contracts are divided in two parts. The first part is the construction phase in which the trees are planted or other activities of project are started. This part of the contract involves a third party that assists the project to start and to solve possible problems that arise in the first three years of the project, e.g. trees that die due to a disease, or deficiencies in technology etc. The second part of the contract involves a 25-30 year period in which the project receives financial support for good maintenance and compensation for the local population that is not allowed to cut the trees that are used for carbon sequestration. This compensation is realized by planting a certain amount of extra trees just outside of the project terrain that can be used for livelihood sustenance.

Table 4.3 Destination Layers Trees for Travel

Layer 1	Trips within Western & Central Europe as far as the Russian border.
Layer 2	Trips to the rest of Europe, other Mediterranean countries (including across the Mediterranean Sea), Iceland, Canary Islands, Azores, Madeira.
Layer 3	Trips to the Eastern United States, Eastern Canada, Caribbean, Mid-Africa, West-Asia.
Layer 4	Trips to the Western United States, Western Canada, Mid-America, Northern South-America, Southern Africa, and Central Asia.
Layer 5	Round trips Southern South-America, South-East Asia including Japan and Taiwan
Layer 6	Round trips Australia, New Zealand, Oceania/Pacific

The calculation mechanism of Trees for Travel works with 6 destination layers in which compensation is offered, and is tested and acknowledged by the RIVM (National System for Public Health and the Environment). As can be seen in Table 4.3, layer 1 are the closest destinations and layer 6 contains the furthest destinations. Due to the fact that it is very complicated to offer the technical support of compensation for the exact kilometres of a certain flight to the intermediaries, Trees for Travel chose to use this layer system when calculating the emissions per flight (telephone conversation, Van Diepen, 2010b).

There are many different generators of greenhouse gas emissions, and Trees for Travel offers compensation of emissions that are generated by all types of transportation modes, electricity use, and all other fossil fuel usage. The quality of the program is ensured by several national and international monitoring entities. On the national level the network of Klimaatcompensatie.nl ensures that Trees for Travel complies to all the quality criteria that have been set up by the members of this network. The network consists of climate compensation providers that have set their own high standard criteria and transparency at their basis, in order to present a credible information platform to educate and advise the public about climate compensation programs. Furthermore Trees for Travel is currently in the process of application for the Netherlands Central Fundraising Bureau Charity Hallmark. This will be an important acknowledgement for the quality of Trees for Travel's activities as a charity foundation. On the international level the projects that are supported by Trees for Travel are controlled and monitored according to the agreements that are set in the Kyoto Protocol and subsequent climate conferences (Trees for Travel, 2009). The forest projects are controlled and verified on sustainable forest management by the Forest Stewardship Council (FSC) (Trees for Travel, 2009).

The Trees for Travel program legitimizes itself through the Kyoto Protocol and the Millennium Goals and consequently tries to contribute at its best to these international agreements. Since the program is an acknowledged charity foundation the compensation payments that are done are tax deductible for Dutch participants. In order to pay for the compensation of CO_2 emissions and CO_2-equivalents Trees for Travel calculates €9,- for each ton of compensated emissions.

Discourses in Trees for Travel

One discourse is very much institutionalized in Trees for Travel and is interspersed in the whole program. This is the *sustainable development discourse* with a specific focus on social sustainability. This discourse is reflected in both the types of projects that are supported by Trees for Travel and the latitude of the program. Based on types of projects it was found that the economic-, social-, and ecological sustainability aspects are of importance. The projects have to become self sustainable and in order ensure that, the projects have to provide the local communities improvement of the aforementioned aspects of sustainability. This is also reflected in the mission of the program which is to *actually make a difference to the local population; they have to reap the benefits too. Therefore we involve the local community during the planning and setting up phases of the project. We create employment and income that will last the term of the project (between 20-50 years).* (Trees for Travel, 2010a para. 2). This statement also reflects a very strong tendency towards social sustainability in the sense that the local population "have to reap the benefits too". The same statement is also reflected in the contracts that are used between the program and the projects. These contracts cover a time span of 20 to 35 years in which the local community is supported to become self sustaining after the contracts are expired. The latitude of the program shows the same discourse through the locations of the projects that are supported by Trees for Travel. These locations are situated in developing countries and chosen in order to help the marginalized people who suffer the most from climate change, and as such reflect the social character of the sustainable development discourse in the program.

The second most institutionalized discourse is the *certification and standards for credibility discourse*. This discourse is reflected in the program through the aspect of legitimacy where the strategic partnership with the alliance klimaatcompensatie.nl (Dutch for climatecompensation.nl) indicates that high standards are set to climate compensation. Furthermore all the projects from Trees for Travel are monitored and certified by UNFCCC assigned organizations according to the standards that are set by the Kyoto Protocol.

With its goal to reduce greenhouse gas emissions in the atmosphere and to increase awareness on climate change and climate compensation as a means to reduce and offset these greenhouse gas emissions, Trees for Travel also reflects the *climate neutrality discourse*.

Through the types of projects that are supported by Trees for Travel it can be seen that both forest projects and energy projects are seen as important ways of sequestering and compensating emissions. This results in the conclusion that both the *energy projects for compensation discourse* and the *forests for compensation discourse* are institutionalized in the program.

4.2.3   CO2ZERO

CO2ZERO is a private initiative that was set up as an additional service to KLM passengers in 2007 by the KLM, a Dutch airline. CO2ZERO is initiated as part of a broader sustainability (CSR) policy where KLM Air France has the ambition to be a leading airline when it comes to sustainability activities (Spinetta, 2009; Spinetta & Van Wijk, 2006). Environmental care, climate care, and CO_2 reduction are the pillars of the CSR policy and the latter is divided in three sections: reduction at the source, control, and compensation. In 2007 KLM compelled itself to compensate all the remaining increase in CO_2 emissions that are caused by growth in air traffic by KLM until 2011 (KLM, 2008b). The CO2ZERO initiative is the part that allows their passengers and corporate accounts to voluntarily compensate for their CO_2 emissions. KLM's goal is to decrease the emissions per passenger with 3 percent in 2012 and 17 percent in 2020 (KLM, 2008b).

Actors and Coalitions within CO2ZERO
As noted above CO2ZERO was set up as part of a strategic partnership with the Dutch branch of the international NGO World Wildlife Fund in order to decrease CO_2 emissions in the atmosphere. CO2ZERO, as being part of Air France-KLM is owned by four shareholders, of which the largest shareholder is Air France-KLM itself with 49,9% of the shares. Furthermore 32,9% of the shares are held by SAK I, which is one of the two administrational foundations that are part of KLM. An additional 11,3% of the shares are held by SAK II, the second administrational foundation of KLM, and the remaining 5,9% of the shares are held by the National State of the Netherlands, which in exceptional circumstances can take over the shares of SAK I and SAK II resulting in 50,1% of the shares for the National State (KLM, 2008b).

In doing so the program targets at the passengers of KLM flights, who can be both national or international. But also companies can chose to compensate through CO2ZERO and can do so every year or half a year. Currently some 28.000 seats are compensated with CO2ZERO and according to the Program Manager Corporate Social Responsibility at KLM, there are dozens of seats compensated on a daily basis (email communication, Van den Berg, 2010).

Resources within CO2ZERO
CO2ZERO does not have any additional income from outside the organization such as from funds or subsidies. Due to the fact that CO2ZERO is an initiative from KLM and is operated by KLM, it can be stated that the program does receive additional financial income through the core business activities, which are: running an airline. This additional finance is used to pay for the overhead costs that come along with the compensation and thus, the support of the Gold Standard projects. The fact that KLM covers for the overhead costs results in a 100% direct flow of the compensation money into the Gold Standard projects.

CO2ZERO only covers renewable energy projects. This is part of their strategic choice to offer only Gold Standard projects in their portfolio. All these Gold Standards programs are renewable energy projects. KLM covers the overhead costs, therefore 100 percent of the donator's money goes

into the projects (personal communication, Van den Berg, 2010). Location wise, the projects that are supported by CO2ZERO are chosen on whether the location has a flawless regime. Furthermore there is a preference for KLM destinations together with the possibility to make a connection with an already existing CSR initiative, such as Destination Nature (personal communication, Van den Berg, 2010). Knowledge about climate change the actions of KLM and CO2ZERO is distributed through the website, billboards, inter alia, at Schiphol Airport, an in-flight magazine, a CO2ZERO brochure, stakeholder consultation meetings and presentations, public affairs, etc (email communication, Van den Berg, 2010). The contact between CO2ZERO and the Gold Standard projects is arranged by a 'project broker' (email communication, Van den Berg, 2010), which indicates that there is no direct contact with the project itself and the local stakeholders. Therefore it is assumed that CO2ZERO is not explicitly involved in communication about climate change and what the local stakeholder can do in order to address the problems that occur due to climate change.

The decisional final power lies with the managing director of KLM who is responsible for the actual decision making, which is delegated to the Director Corporate Social Responsibility & Environmental Strategy (email communication, Van den Berg, 2010). This could indicate a very hierarchical structure and consequently that there is not much room for interaction between the different stakeholders that are involved in the program. But, as noted above, there are stakeholder consultation meetings and presentations held by KLM in order to communicate with the stakeholders and this reflects the willingness of KLM to listen to their stakeholders. To what extend the input of opinions and feedback from stakeholders is influencing the actual decision making is not known.

Rules of the Game within CO2ZERO
As in every organization, there are different written and unwritten rules within the CO2ZERO program in order to structure stakeholders' behaviour. One of these rules involves the procedure for participants to compensate for their flight emissions. Individual passengers can book a flight through the website and KLM offers the option for compensation as part of the booking procedure. When companies want to compensate for their flight emissions, they can also do that by contacting KLM every year or half a year and calculate the emissions for that certain period (email communication, Van den Berg, 2010).

In order to start the connection between a project and CO2ZERO, a Gold Standard project developer contacts KLM to inform them about the project and fulfils a brokers role between the project and, in this case, KLM CO2ZERO (email communication, Van den Berg, 2010). KLM chooses the projects from the portfolio that is offered by Gold Standard. One of the current issues with Gold Standard projects in general is that there are only a few of these projects all over the world, and that its criteria are too high to be able to comply, which consequently results in the low number of Gold Standard programs. As soon as the connection between the project and CO2ZERO is established and the project is developed, it will provide emission rights for a certain amount of years (email communication, Van den Berg, 2010). Furthermore businesses that want to compensate for their emissions through CO2ZERO can choose to do so every year or half a year. This is all on a strict voluntary basis (email communication, Van den Berg, 2010), and hence there are no contracts involved with neither the projects or the participant donators.

The calculation mechanism that is used by CO2ZERO is based on the IPCC guidelines and can be explained as follows. The overall mass of the payload (passengers and cargo/luggage) is divided over the equipped passenger mass (necessary equipment to transport passengers) and the equipped cargo mass (necessary equipment to transport cargo). These two types of masses were calculated for each aircraft type and the outcomes are the average fuel efficiencies per passenger and per ton of cargo. The average factors for the equipment weights per passenger and per amount

of cargo load are derived from Air France-data (KLM, 2008a). The average amount of fuel per flight are calculated by multiplying the average fuel efficiency per passenger (or amount of cargo load) with the actual flight distance from origin to destination. Then the emissions per flight are calculated with the average fuel usage per passenger (or amount of cargo load) in tons multiplied by 3.157 (one ton of fuel produces 3.157 tons of CO2) (KLM, 2008a). CO2ZERO only compensates CO_2 emissions and no CO_2-equivalents, that are generated by air travel.

The quality of the program is ensured internationally by the fact that only Gold Standard projects are supported, and WNF ensures that CO2ZERO complies their agreement to reduce CO_2 emissions in the atmosphere and to compensate for the remaining increase of emissions after reduction until 2010 (KLM, 2008b). Furthermore all CO2ZERO's activities as a part of the CSR policy of KLM, are ISO14001 certified. Nationally CO2ZERO is monitored by KPMG Sustainability which checks the calculations and all data on CO_2 emissions.

No information was found on whether KLM legitimizes its CO2ZERO program through national laws, regulations and or agreements. On the international level however, it was found that CO2ZERO is legitimized by the Kyoto Protocol and the International Air Transport Association (IATA) goals to fly CO_2 neutral in 2050[26] (KLM, 2008b).

CO2ZERO is part of a commercial organization and therefore the compensation payments are not tax deductible. For each ton of CO_2 emissions the participant pays €5,95.

Discourses in CO2ZERO

The main discourse that was found to be institutionalized in CO2ZERO is the *carbon-neutrality discourse*. The institutionalization of this discourse is reflected by aspects of legitimacy and latitude. On the aspect of legitimacy the strategic partnership with WNF and their goal to reduce carbon emissions from the KLM flights in the atmosphere and to offset the residual emissions, clearly reflects the discourse of carbon neutrality. This is also supported by the aim of the IATA to have all member airlines (including KLM) to be carbon neutral by 2050. Furthermore the name of the program in itself implicates a very strong tendency towards this discourse.

The second discourse that was found in the program is the *certification and standards for credibility discourse*, that is reflected in the legitimacy of the program and to a lesser extent in the types of projects that are supported by CO2ZERO. The fact that all the program's activities are monitored and certified by ISO14001, and its financial figures and compensation results monitored by both KPMG Sustainability and WNF reflect that high standards are perceived as important to create credibility. Lastly there is the specific choice of the program only to invest in Gold Standard projects, which are the highest standards within the CDM projects. This also brings us to the last identified discourses, which is the *energy projects for climate compensation discourse*, and the *sustainable development discourse* that are reflected by the use of Gold Standard and consequently only energy projects that are sustainably managed. Air France-KLM supports the notion of energy projects as the only way to efficiently offset flight emissions, and as such represent this discourse.

---

[26] The IATA is an international network that consists of almost all airlines in the world (KLM, 2008b).

Table 4.4 Comparison dimensions within Dutch programs

		Green Seat	TfT	CO2ZERO
Actors	*Initiator(s)*	Private	Private and non-profit	Private
	Shareholders	Private and non-profit	—	Non-profit (Stichting Administratiekantoor KLM I and II) government
	Strategic/financial Partners	Private non-profit (MVO Nederland and ICROA) National and international	National and international governmental, private, and non-profit	NGO International (WNF)
	Operational Partners	National private non-profit (Climate Neutral Group)	National and international private, non-profit, NGO	Private (KLM-Air France)
	Project Partners	Private, non-profit, and NGO's National and international	National private, non-profit, NGO	—
	Target audience	Individual travellers and travel agencies as intermediaries	Individuals (travellers and others), businesses, governments, travel agencies as intermediaries	Individual KLM passengers, and companies
		National	National and international	National and international
	Intermediaries	36	46	—
	Individual Participants	2007: no info 2008: no info 2009: at least 40.000, at maximum double	2007: ±450 2008: ±1036 2009: ±1136	2007: no info 2008: no info 2009: no info 28.000 seats since initiation in 2007
	Participant Organizations	2007: no info 2008: no info 2009: no info Currently 373	2007: ±120 2008: ±120 2009: 142	2007: no info 2008: no info 2009: no info Currently 15
	Mutual Relation	Competition Trees for Travel and CO2ZERO	Competition Green Seat and CO2ZERO	Competition Green Seat and Trees for Travel
Resources	*Sources of Finance*	National: self generated through compensation, consultancy, IT systems and CO2 calculations	National: 3 subsidies in past, self generated through compensation, donations Trees for All	National: self generated through core business activities as airline, compensation
		International: —	International: —	International: —
	Division Finance %	60% goes to projects 40% to awareness creation, improvement technical- and calculation systems	At least 75% with the aim for an average of 80%.	100%, KLM covers all overhead costs
	Project Types	Forestry and renewable energy → 43% biomass projects, 15% wind energy projects, 39% forestry projects, and 3% water energy projects	Forestry, preservation and renewable/sustainable energy	Renewable energy
	Project Locations	National: —	National: —	National: —
		International: divided over 3 continents	International: divided over 3 continents	International: based on flawless regime, KLM destination, connection with existing CSR initiatives

Rules of the Game	*Knowledge Distribution*	Towards target group: website, free publicity in media, flyers via intermediaries, and presentations	Towards target group: website, intermediaries, and free publicity in media	Towards target group: website, billboards, in-flight magazine, brochure, stakeholder consultancy meetings and presentations
		Towards support receivers: training and educational presentations	Towards support receivers: local participation	Towards support receivers: handled by Gold Standard
	Distribution Decisional Power	Divided among: shareholders → general issues; direction → specific issues like vision and mission; marketing employees → external communication	Multi-disciplinary board of directors with 6 members has final say, responsibility, and accountability.	Managing director KLM→ Director Corporate Social Responsibility & Environmental Strategy
	Application Participants	Individuals: Directly: go to website → fill out location of origin and destination; one-way or round trip; nr of passengers; CO2 or all emissions → calculation Green Seat → pay compensation	Individuals: 3 ways via website 1. Flight emissions: compensation for air travel 2. Climate Calculator: compensation per generator 3. Direct donation	Individuals: compensation is offered in the booking procedure
		Via intermediaries: 5-star: book trip → compensation is paid; 4-star + 3-star: book trip → select compensation option → pay compensation		
		Organizations: not applicable	Organizations: contact TfT →chose to plant with or without certification → provide overview usage →calculation TfT → contract signed → pay compensation	Organizations: compensation per year or half a year → contact KLM → calculate emissions
			Travel agencies: place link TfT on website → TfT places link to agency; distribution promo material → place agency stamp on answering coupon; Info in brochure; integrate TfT in booking procedure (10% provision for agency); sell compensation vouchers to clients	
	Application Support Receivers	Contact Green Seat → carbon feasibility assessment → contracting carbon credits → development financial models and business plans → project preparation → verification and registration → post registration	Contact TfT or TfT contacts project → criteria for participation sent → when criteria met amounts sequestration calculated → costs calculated → financial support defined	Gold Standard project 'broker' contacts KLM → KLM chooses project
	Contracts	Donator: 2-3 years	Donator: average 3 years	No contracts
		Receiver: 4-5 years	Receiver: between 25-30 years → 2 phases: construction phase (around 3 years) and phase for maintenance and compensation local livelihood losses	Gold Standard contracts
	Calculation Mechanism	Based on UNEP Greenhouse Gas Protocol	Tested and acknowledged by RIVM (National Institute for Public Health and the Environment)	Based on IPCC
	Generators Compensated	Air travel (Climate Neutral Group all other generators)	All types of transportation modes; electricity use; other fossil fuel usage	Air travel

	Quality Control	National: BDO CampsObers Audit & Assurance	National: Klimaatcompensatie.nl; Applying for Netherlands Central Fundraising Bureau (CBF) Charity Hallmark.	National: KPMG Sustainability; WNF (World Wildlife Fund Netherlands)
		International: ICROA; Gold Standard; VCS; CDM Standard; Climate Community and Biodiversity Standards. Verification through UNFCCC chosen organizations.	International: Kyoto; Forest Stewardship Council (FSC)	International: WWF (through WNF)→ Gold Standard; ISO 14001 certification
	Laws /conventions	National: no information available	National: no information available	National: no information available
		International: Kyoto Protocol	International: Kyoto Protocol and Millennium Goals	International: Kyoto Protocol, IATA goals to fly CO_2 neutral in 2050
	Tax deductible	No	Yes, for Dutch citizens	No
	Payment systems	iDEAL, VISA, MasterCard, traditional transfer	iDeal, PayPal (including VISA, MasterCard, and American Express), traditional transfer	No information available
	Costs / ton emissions	€11.90	€9,-	€5.95
	Emissions compensated	CO_2-equivalents	CO_2-equivalents	CO_2
Discourses		climate neutrality discourse	climate neutrality discourse	carbon-neutrality discourse
		certification and standards for credibility discourse	forests for climate compensation discourse	certification and standards for credibility discourse
		energy projects for climate compensation discourse	energy projects for compensation discourse	energy projects for compensation discourse
		sustainable development discourse	sustainable development discourse	sustainable development discourse
			certification and standards for credibility discourse	
Effectiveness	Yearly average compensated emissions	No information available	49.000 tons/year	No information available

5   Comparative Analyses Costa Rica and the Netherlands

There are many differences and similarities to be found between the different climate compensation programs within the investigated countries themselves, but also between the different countries. This chapter will analyze and compare the outcomes of the research which were presented in the previous chapter. Firstly in Paragraph 5.1 the Costa Rican programs will be analyzed and compared with each other according to the four PAA dimensions, where after Paragraph 5.2 will do the same with the Dutch programs.

5.1   Comparative analysis Costa Rica

5.1.1   Actors and Coalitions

When looking at the Costa Rican programs an important difference can be found in the fact that Green Your Trip is the only private program, but still the government is involved through a partnership with the state university. This points towards the fact that there is a lot of governmental influence and interference in climate compensation activities.

Green Your Trip communicates very strongly that they want to address a more general target audience compared to Living Forest and Clean Trip by "making carbon neutrality accessible for ordinary citizens" (Ashoka, 2009 para. 3), whereas technically taken not much differences in favour of this choice of target audience were found. With Clean Trip compensating emissions from individual travellers on international flights, and Living Forest covering for all individuals and organizations that want to compensate otherwise generated emissions, Green Your Trip does not cover another target audience since they target all individuals and organizations to compensate for all types of emission generators. Ironically enough, Green Your Trip charges twice the price of their competition and as a result, assumedly does not reach their supposed target group. This issue relates to the rules of the game, and will therefore be further dealt with in Paragraph 5.1.3.

Green Your Trip has some more participant organizations in their portfolio compared to Living Forest, whereas the individual travellers mainly compensate with Clean Trip. There are many tourism related organizations that participate in Green Your Trip and as such, the connection with the tourism industry seems to be much stronger within Green Your Trip compared to Living Forest. This could indicate a stronger belief in a private initiative from the tourism related organizations than they would have in the governmental initiative. There are several interpretations that can be given to this indication. Firstly it could be the case that the tourism related organizations, which are private themselves, have more confidence in the private program than in the governmental program due to a distrust towards the government on whether the money really reaches the purposed destinations, or due to personal connections with people within Green Your Trip. A second explanation could be the differentiation that takes place between the two programs in the sense that Green Your Trip only uses native tree species for their reforestation projects, whereas FONAFIFO uses non-native tree species with are, according to an anonymous respondent[27], "(…) used by them [FONAFIFO] for commercial purposes so they can boost the country's economic development". Another reason for participation with Green Your Trip that has been given by one of the respondents is the fact that Green Your Trip is far more flexible compared to the governmental program and allows the participants to plant their own trees on their own land (personal communication, Stein, 2009b). The above presented findings reflect that Clean Trip seems to be the

---

[27] Due to the political sensitivity of the subject and the respondent's involvement in the political arena, the respondent has chosen to remain anonymous.

program which is most interesting for individual travellers, whereas Green Your Trip seems to be most interesting for tourism related organizations. For the individual participants this could be explained through the lower costs that are involved in compensation with Clean Trip, and maybe the trust issues around the governmental program that seem to play a role for the tourism related organizations, do not play a role for the individual participants. This could be explained through the assumption that the tourism related organizations in Costa Rica are very much involved in sustainability practices, and consequently aware of issues around the government and sustainability, while generally spoken the individual traveller 'just' wants to compensate for their flight emissions from the sense of doing something good, without being strongly aware and/or involved in Costa Rican sustainability discussions.

5.1.2　　Resources

The two Costa Rican governmental programs as being part of FONAFIFO, have –and still do– received vast amounts of money from various international support programs since its initiation. Green Your Trip, has one international organization that provides financial support. Although the exact figures of how much financial support Green Your Trip receives from this one organization is not known, it can be estimated that Living Forest and Clean Trip receive far higher amounts of financial support from the international support programs compared to Green Your Trip. This could be due to the fact that FONAFIFO's programs are part of the PES system and accordingly not only aim at carbon sequestration, but also for the protection of biodiversity by providing financial support to local farmers. Green Your Trip is not involved in PES and has as its main mission to plant as much trees as possible in order to be able to mitigate carbon dioxide, which is evidently not as broad as the structure of which Living Forest and Clean Trip are part (being FONAFIFO's PES system). As a consequence Green Your Trip has to provide for much of its own income, and this is, in addition to the sale of carbon credits, done through market based instruments such as the selling of green postcards and eco-stickers for car- and motor bike owners. Within FONAFIFO Living Forest and Clean Trip are the tourism related market based instruments that are used to supplement its income. All in all it can be concluded that Green Your Trip is more market based and 'forced' to seek the commercial path in order to sustain its activities compared to the heavily funded Living Forest and Clean Trip.

Whether there are big differences in the percentage of the donated money that is distributed directly to the final destination of carbon sequestration between the three Costa Rican programs is unfortunately not found, but based on the information that is available some assumptions can be made nonetheless. The 100 percent distribution of the money that is collected through the FONAFIFO programs towards the carbon sequestration efforts would not be realistic for Green Your Trip. As noted earlier, FONAFIFO receives a lot of funding money from international organizations, and is therefore able to cover operational overhead costs from their additional income. Green Your Trip however, relies mostly on commercial activities in order to sustain their sequestration activities. Therefore it seems evident that the overhead costs have to be covered by these commercial activities, and that consequently not the full 100% of the compensation money can be distributed to the sequestration activities itself. There is also a difference to be found in the final destination of the money. Green Your Trip plants new trees on several properties, of which a number are owned by the participants themselves. As mentioned in Paragraph 4.1.2, the money distribution within FONAFIFO is very opaque, which makes it impossible to determine whether the local farmers who receive the money have entangled interests with FONAFIFO.

The main difference in type of projects between the FONAFIFO projects and Green Your Trip is that the latter only uses native tree species on the contrary to FONAFIFO, that allows non-native

species as well. Another difference is that Green Your Trip does not only have projects in Costa Rica, but also in other Latin-American countries, on the contrary to Living Forest and Clean Trip, which only have projects in Costa Rica itself.

Information that was found via an anonymous respondent and a literature study reflects the strong power FONAFIFO holds to itself and some large influential actors. Not much of the decision making power is distributed to other actors which indicates a stronger hierarchical decision making process within the two FONAFIFO programs as within the Green Your Trip initiative. For the latter initiative it was found that in general the director of the program takes the decisions, but that when the situation requires the involvement of other actors these are involved in the decision making process as well. With the National University of Costa Rica as one of the most involved actors, it can be assumed that they have a strong influence on the decision making within Green Your Trip. Additionally, the other actors within the program who are both participants and landowners of the land where trees are planted, can decide that the trees they have 'bought' with Green Your Trip in order to compensate for their emissions, should be planted on their land.

5.1.3   Rules of the Game

Concerning the rules of the game it was found that Living Forest works with contracts with a minimum of five years and one hectare of protected forest are involved, whereas Green Your Trip involves a contract for only one year. Therefore it can be concluded that Green Your Trip is much more flexible for the participant organizations compared to Living Forest. Since Clean Trip is not directly linked to the local projects, no direct related contracts are at place.

When looking at the contracts with landowners that are involved in the FONAFIFO programs, it was found that in order to receive financial support the landowners have to fulfil a lot more criteria compared to the Green Your Trip landowners, which makes the latter program much more flexible to the landowners.

There are some significant differences between the programs' choice of types of CO_2 generators that are included. Green Your Trip offers a wider defined array of generators of carbon dioxide that can be compensated through the program in comparison to the FONAFIFO programs. Where Living Forest offers compensation for emissions generated by car-, boat-, domestic air travel, and all other tourism activities, and Clean Trip additionally offers compensation for international air traffic from and to Costa Rica. Green Your Trip offers compensation for all the aforementioned activities plus livestock activities, business and industrial activities, and energy consumption.

There are many laws and regulations that can be used in order to legitimize a program. FONAFIFO uses six national and two international laws and regulations/agreements to legitimize its existence and practices. Green Your Trip, however only uses one national policy to legitimize its existence, and on international level no information was found. This could indicate the difference between a governmental program and a private program, where the governmental program is probably much more based on bureaucratic rules and regulations, and is consequently much more aware of it in its communication compared to private initiatives.

A big difference in rules of the game between the FONAFIFO programs and Green Your Trip is that Living Forest and Clean Trip are tax deductible for Costa Rican citizens. This is due to the fact that the latter two are governmental programs and therefore can be deducted from tax.

5.1.4   Discourses

All the Costa Rican programs share mainly the same discourses, with the only difference found in the fact that Green Your Trip aims to include energy projects in their portfolio by 2012. Furthermore there is a difference found in ideational believes on which types of trees that should be used. This, however is not sufficient to form a discourse on its own, and falls under the more general discourse of 'forests for climate compensation'. The fact that Green Your Trip has its operational partnership with the state university which takes care of the reforestation and afforestation activities, shows an interesting point when it is compared with the other (governmental) initiatives. These governmental initiatives also use exotic non-native tree species for reforestation and afforestation, whereas the governmental organization that leads the choice on which tree species are planted where as part of the 'private' initiative uses only native and endemic tree species. This indicates that the government reflects the institutionalization of the sustainability discourse with two focus points which seem to work contradictory, namely, the focus on economic development that is supported with the use of economically valuable exotic tree species on the one hand through the FONAFIFO programs, and the focus on ecological sustainability that is supported with the choice for only native tree species, through the governmental involvement in the private initiative on the other.

In Costa Rica the *sustainable development discourse* is focused on both economic sustainability and environmental sustainability as two aspects that seem to be mutually exclusive. Costa Rica still faces problems with economic development and has some poverty issues going on. It seems that the country wants to solve these problems and at the same time wants to attend to environmental issues. Costa Rica has a strong reputation and image on forest- and environmental conservation due to their legislation and national park system, and also the PES system is seen as an example to other countries. Costa Rica cannot set this image and reputation aside and as such has to provide the world with policies that are consistent with this image and reputation while in the meantime also being eager to encourage economic development. As a result Costa Rica can be seen as a country with a slightly schizophrenic character.

5.1.5   Effectiveness

In order to provide an insight in the overall contribution of the three programs information on annually averages of compensated emissions were gathered. Unfortunately no information was found on the Living Forest program, whereas Clean Trip can be accounted for 2.165 tons of compensated CO_2 emissions in its first year and taking Garcia's estimation of similar results in 2009, the number of 2.165 tons can be taken as the yearly average. Green Your Trip, which seems to be a less significant program compared to FONAFIFO stands for a yearly average of 20.747 tons compensated CO_2 emissions, which is significantly higher than Clean Trip. In this it needs to be noted, however, that there is no information available on Living Forest and that Clean Trip only counts for compensated emissions from international air travel to and from Costa Rica, whereas Green Your Trip offers compensation to more different types of generators.

5.2   Comparative Analysis the Netherlands

5.2.1   Actors and Coalitions

The biggest difference between the three Dutch programs actor-wise is the fact that Trees for Travel is the only charity foundation and consequently a non-profit initiative. This is also reflected in the partnerships of Trees for travel, which are mainly with non-profit organizations. This clearly reflects a wish to operate on the side of sustainable development and not to seek the commercialized path that has been chosen by the other two programs. With respect to the project partners it was found that CO2ZERO works with a an external broker who takes care of the projects that are supported by the program. The other two programs are more involved with the projects through project partners and even share one of their project partners. This partner is the foundation Face the Future, which is not only a project partner for both Trees for Travel and Green Seat, but also a shareholder in the latter program. This indicates that there could be some entanglement of interests at place between Face the Future and Green Seat.

Another large difference is that both Green Seat and CO2ZERO only target at air travelers where Trees for Travel also includes other target groups. It needs to be stated, however, that the Climate Neutral Group, of which Green Seat is part, targets other target groups than air travelers and as a whole does offer compensation to an evenly broad target audience. Only CO2ZERO does not use intermediaries to offer their compensation program to their target group since only KLM passengers, corporate accounts and cargo costumers are targeted and the option to compensate for flight emissions is offered as part of the booking procedure. The compensation results that are achieved within the three programs differ significantly with Trees for Travel through which only 1135 individual participants have compensated their flights, compared to Green Seat and CO2ZERO with which respectively 40.000 and 28.000 seats were compensated.

Only 3 out of 46 intermediaries of Trees for Travel also compensate their own emissions, compared to 27 out of 36 intermediaries of Green Seat (CO2ZERO does not use intermediaries). This shows that even though Trees for Travel has found more intermediaries to offer their compensation service to individual travelers, they do not seem to be able to convince these intermediaries to give the good example and compensate for their own emissions through Trees for Travel. A plausible explanation for this could be that due to the commercial background of Green Seat, the latter is stronger in selling their service to the market compared to Trees for Travel.

5.2.2   Resources

As a charity foundation and hence non-profit program, Trees for Travel is the only organization that has received subsidy from the Dutch government. The other two programs received no financial support and have other activities besides the compensation itself in order to obtain more financial resources. CO2ZERO is the only service that is a complete side-activity from the core-activities of KLM, which is flying passengers from A to B, whereas Green Seat has other commercial activities as their side-activities with the compensation program itself being the core-activity.

Another difference was found that relates to the money distribution towards the projects that are supported by the different programs. Due to the fact that CO2ZERO's overhead costs are covered by KLM, it can distribute 100% of the money into the projects. Green Seat, however only invests 60% of the compensation money in the projects. This large difference can be explained through the fact that Green Seat needs to invest in technical mechanisms in order to be able to offer their compensation service via the intermediaries, whereas CO2ZERO only has to offer their compensation mechanism on the KLM website. On the other hand, both programs have additional income through commercial activities that could cover for the overhead costs, which is the case for

CO2ZERO. The question thus remains why Green Seat can only invest such a small amount of the compensation money in the projects themselves, while there is additional income that could (partly) cover the overhead costs? Trees for Travel does not have additional income from commercial activities, and as a charity foundation is obliged to invest at least 75% of the compensation money in the projects. With their aim to distribute 80% of the compensation money Trees for Travel sits in the middle of the three compensation programs when it comes to the distribution of the financial resources to the local projects.

Related to the types of projects that are supported by the programs it was found that CO2ZERO only invests in Gold Standard CDM projects, which are all renewable energy projects. Green Seat currently also only has renewable- and sustainable energy projects in their portfolio, whereas Trees for Travel also invests in forestry projects and as such offers the widest array of project types. As noted in Chapter 1, the effectiveness of forestry projects in offsetting greenhouse gas emissions is heavily debated and consequently CO2ZERO has chosen to include only Gold Standard projects. Renewable energy is seen as the only effective way to compensate greenhouse gas emissions and therefore, WWF the Netherlands supports Gold Standard and consequently CO2ZERO. Also a shift was seen in Green Seat, that recently has decided not to include any more forest projects in their portfolio.

The CO2ZERO criteria to make a choice for a certain project location is based on rather different criteria that are used by the other two programs. The criteria from CO2ZERO have the Gold Standard as basis from which further criteria are set in order to make sure that all the projects in CO2ZERO's portfolio are completely in line with KLM's internal CSR policy. These additional criteria are whether or not the location has a flawless regime/reputation and whether there is another CSR initiative to which the project can be -or is- connected in order to be completely in line with the CSR policy. Green Seat and Trees for Travel, however, base their choice of location on equal division between different countries and continents of the 'developing world'. This difference in choice criteria can also be related to the certification and standards for credibility discourse that is very much institutionalized in CO2ZERO and as such shows the intertwined relationship between the different PAA dimensions within the policy arrangement.

5.2.3   Rules of the Game

There are many different rules of the game that are institutionalized in the three programs and as such in the policy arrangement. One of the most significant differences in these rules is the fact that CO2ZERO only compensates CO_2 emissions, whereas the other two programs compensate CO_2 plus CO_2-equivalent emissions. Green Seat offers the CO_2-equivalent emissions as an extra option, whereas Trees for Travel automatically covers all emissions. This is not only a different set of formal rules on which emission types are compensated, but it also reflects an interesting difference in discourses, which will be handled in paragraph 5.2.4.

Another significant difference was found in the fact that all the programs have rather different relationships with their projects through the contracts that are used. Green Seat finds sustainable relationships with the projects they support very important and as such use contracts with a period of five years. When this is compared to the contract period that is handled by Trees for Travel (25-30 years) one can ask him- or herself to what extent a 5 year period represents a sustainable relationship. CO2ZERO buys emission rights from the projects to which it is connected through the Gold Standard and as such has to sign a contract with the Gold Standard for a minimum of one year (Gold Standard Foundation, n.d.).

There are also large differences in prices that are charged per ton of emissions. Green Seat charges double the amount that is charged by CO2ZERO, and Trees for Travel sits in the middle of both the charged prices. This is a very interesting issue given the discussion earlier on about the distribution of financial resources. It seems obvious that CO2ZERO can charge lower prices per ton of emissions due to the fact that their overhead costs are covered by KLM. When looking at the €11,90 that is charged by Green Seat and the €5,95 of CO2ZERO it can be concluded that the whole €5,95 is distributed to the Gold Standard project of CO2ZERO, and 60% of the price per ton of Green Seat, being €7,14 that is distributed to the projects that are supported by Green Seat. Saying that Trees for Travel distributes an average of 77,5% from their price of €9,-[28] per ton emissions to their projects, which is €6,98. All in all this simple calculation shows that despite the fact that Green Seat "only" distributes 60% of the compensation money to the projects they still contribute more than the other two programs. In addition there is a difference in the fact that Trees for Travel is a charity foundation, which means that the money that participants 'donate' to the program is tax deductible and consequently indirectly lowers the compensation price.

Related to the rules of the game concerning quality control, it was found that CO2ZERO's quality control is connected to a world famous nature conservation brand, whereas the quality control of the other programs is based on entities with expertise in climate change and climate compensation. The choice of CO2ZERO to connect themselves to WWF the Netherlands is a very strategic choice to reach their target audience, who are, generally taken, not experts on climate change and therefore are not familiar with the entities on this subject. WWF the Netherlands on the other hand is very well known and acknowledged as a trustworthy organization amongst the general public and consequently can create more credibility towards this target audience.

5.2.4 Discourses

The aforementioned difference in choice of emission types to be included in the compensation program already suggested a difference in discourses as well. This difference can be found in the two closely related discourses of *carbon neutrality* and *climate neutrality*. Trees for Travel and Green Seat reflect the climate neutrality discourse whereas CO2ZERO reflects the carbon neutral discourse through the fact that the latter only compensates for CO_2 emissions whereas the other two compensate for both CO_2 and CO_2-equivalents.

On the whole it appeared that the *certification and standards for credibility discourse* is pretty much equally important for all the programs. There was, however, one difference that is reflected in Trees for Travel which, through Trees for All, also offers non-certified emission reductions. In doing so it takes a sidestep away from the certification and standards for credibility discourse that is heavily institutionalized in all the programs. This issue also relates to the rules of the game that are changed in relation to this particular side-activity/program while in the meantime it also changes the division of resources as it allows to use a higher amount of the money in order to plant trees instead of "loosing" it to the expensive certification systems.

Overall it was found that all programs very much reflect the *sustainable development discourse* with a special focus on social sustainability. CO2ZERO reflects the *carbon neutrality discourse* more than the other two programs. This signifies the different priorities and focus points on climate compensation to which the three programs have committed themselves. As the name CO2ZERO also suggests, this service is very much focused on taking their responsibility to reduce CO_2 emissions that are caused by flying with KLM and as such contributes to carbon neutrality. Trees for Travel has

---

[28] This price is before tax deduction, which means that at the end of the year the participant can deduct the tax that is paid for this donation from the Dutch tax office.

a clear focus on the social wellbeing of the local population in developing countries that has to deal with the negative (environmental) consequences of climate change. By supporting projects that deal with these negative environmental consequences the local population should simultaneously reap the benefits of these projects. This is also very much supported by CO2ZERO through the choice of Gold Standard projects, in which social prosperity is an important criteria as well, although this is not communicated as explicitly as Trees for Travel does.

6   Conclusions and Discussion

6.1   Conclusion

A central research question with specific research questions has been formulated in order to help the researcher to comply the research objective. This central research question was formulated as follows: *What are the differences and similarities with respect to the internal dynamics and discourses, between the tourism related climate compensation programs in Costa Rica and the Netherlands and how do they represent the current debates on climate compensation?*

In order to conduct the comparative analysis the Policy Arrangement Approach has been used to analyze six climate compensation programs in two countries, being Costa Rica and the Netherlands. In using this approach four dimensions have formed the basis of research. These dimensions are the actors and coalitions that are to be found in a given policy arrangement; the resources that are available to the actors and who of these actors exercise control over the resources; the rules of the game that are at play in the policy arrangement; and lastly the discourses that are present in the policy arrangement. The policy arrangement approach has allowed the researcher not only to identify what is going on in every different dimension, but also to get valuable insights in the complex relations between the dimensions and their interconnectedness. The approach also allowed the researcher to link second level discourses in the policy arrangements with first level (global) discourses and consequently link the dynamic practicalities of the programs to structural change in society.

6.1.1   Internal Dynamics in Climate Compensation Programs

Actors

The interference and influence of the government proved to be very different between the two countries that were investigated. In Costa Rica the government exercises a lot of influence, and as such power, on all the dimensions of the programs. The influence of the government is for example found in the use of resources and that in all the Costa Rican programs it is the government who has the control over some of the resources. In the FONAFIFO programs this control over resources is expressed in the final decision making power on which landowners receive financial support, whereas in the private initiative the state university is responsible for the choice of tree species and where they are planted. Furthermore the laws and regulations that stand at the basis of the Costa Rican programs reflect the power of the government since it is this powerful actor who makes these laws and regulations. When relating the influence of the Costa Rican government to Liefferinks typologies, as can be seen in Table 6.1, it can be concluded that although there are some sidesteps to neo-corporatism, etatism is the most present typology in Costa Rica. The situation in the Netherlands, however, shows that there is hardly any interference of the government. The only signs of governmental involvement are the acknowledgement of Trees for Travel as a charity foundation, and the subsidies that have consequently been assigned to Trees for Travel. This subsidy also shows a relation to the financial resources of the program, and the fact that the organization is acknowledged as a charity foundation and therefore being tax deductible relates to the rules of the game. In relation to the typologies this is a rather diffused policy arrangement. This policy arrangement reflects several typologies and, as can be seen in Table 6.1, none of the typologies is dominant. Overall the typologies of sub-politics and neo-corporatism were reflected the most in the Dutch policy arrangement and as such shows a mixed typology.

Table 6.1 Typologies of Studied Policy Arrangements

	Costa Rica		The Netherlands	
Characteristics		*Ideal type*	*Characteristics*	*Ideal type*
Access	Low	Etatism	Specific	Sub-politics
Control over major resources	State	Etatism	Non-state	Sub-politics
Prevailing rule of interaction	Instrumentality/negotiation	Etatism/neo-corporatism	Competition/ negotiation	Liberal-pluralism/neo-corporatism
General character of substantive discourses	Imposed/agreed	Etatism/neo-corporatism	Agreed	Neo-corporatism

The fact that none of the Costa Rican programs structurally use intermediaries to offer their services to the target audience is another difference. This is totally different from the Dutch situation where two of the three programs have heavily institutionalized the use of intermediaries as an instrument to reach the public and increase participation in their programs. The inclusion of intermediaries also results in a difference in rules of the game compared to programs that not have intermediaries included in their actor dimension, as the potential participants from programs with intermediaries can arrange their compensation via both the intermediary or directly with program itself. The potential participants within the programs without intermediaries, however, can only compensate directly with the program itself.

Resources
With respect to the resources it was found that Costa Rica is a 'receiving' country, whereas the Netherlands is a 'supporting' country. This means that all the Costa Rican programs receive financial support from international support organizations from the so called developed world. The Netherlands is part of this developed world and as such the Dutch compensation programs also provide financial support to the projects in countries in the so called developing world of which Costa Rica is part. In the Netherlands only one program received financial support from the government due to its status as a charity foundation, which in turn offers financial support to sustainable development projects in countries in the developing world.

Rules
A distinction within the rules of the game is the choice for different types of projects, which is closely related to the discourses since the choice of certain project types reflects certain discourses, this, however, will be dealt with under the header 'Discourses' in this paragraph. In Costa Rica currently all the projects that are supported by the compensation programs are forest projects[29] in which the forests are used as a way to sequester carbon dioxide. The Costa Rican government has the power to decide which types of projects receive PES, and since PES' core activity is the protection of forests and biodiversity it is logical that sustainable energy projects are not included in their portfolio. The issue of sustainable energy is handled by another governmental department and consequently does not involve FONAFIFO and the payments for environmental services which are related to FONAFIFO compensation programs. The projects that are supported by the Dutch compensation programs all include sustainable energy issues in their project portfolio, except Trees for Travel that still has forest projects in its portfolio. These sustainable energy projects are all based on avoided emissions whereas the forest projects cover a combine avoided emissions through

---

[29] Taken that the sequestration projects do what they claim to do without questioning the project's CDM certification.

the conservation of existing forests, with storage of emissions through reforestation and afforestation.

Another interesting finding is that all the Costa Rican programs have their calculation mechanism based on IPCC guidelines, whereas in the Netherlands only one program refers to IPCC. The other two programs legitimize their calculation mechanisms through UNEP and the RIVM (National Institute for Public Health and the Environment). A recommendation for the Dutch programs is to use one single basis for their calculation mechanism instead of all referring to something else. In choosing all these different bases and control mechanisms for calculation the whole system becomes very opaque, making it more difficult to the interested layman to understand how the calculations are made and whether sound methods are used.

Discourses
The discourses that are present in both countries differ from each other on the types of emissions that are seen as important to be compensated. In Costa Rica the shared discourse on this is the carbon-neutrality discourse due to the country's governmental goal to become a carbon neutral country. This national governmental goal also reflects the influence of the government on the institutionalization of this discourse. In the Netherlands more focus was found on reducing all greenhouse gasses and not only carbon dioxide, and consequently the climate-neutrality discourse was found as more institutionalized in the Dutch programs. In relation to this it is recommended to conduct additional research on the backgrounds of Costa Rica's choice to become carbon neutral instead of climate neutral.

The second difference in discourses that was identified is the difference in the interpretation of sustainable development. In Costa Rica the sustainable development discourse is focused on both economic sustainability and environmental sustainability as two aspects that seem to be mutually exclusive. The Dutch programs are much more outward oriented and as such the general aim is to support developing countries with sustainable development practices that ideally not only takes economic development, through the aspect of economic sustainability, into account, but also environmental and socio-cultural aspects.

The last conclusion that relates to discourses in the programs was already shortly mentioned under the heading 'Rules' in which there were clear distinctions between the types of projects that are supported by the programs in the two countries. Where in Costa Rica the focus is on forests for climate compensation, in the Netherlands the focus was found on energy projects with only one organization including forests for climate compensation. This showed a forest projects for climate compensation discourse in Costa Rica, and a combination of energy projects for climate compensation discourse and to a much lesser extent the forest projects for climate compensation discourse. This difference could be explained through the fact that Costa Rica is country with many protected forest areas that can serve as carbon-sinks. Furthermore the sustainable energy resources - which provide for 90% of the country's energy use- are part of another governmental institution and therefore might not be included in their CO_2 compensation programs.

General conclusion
As a general conclusion besides the four dimensions of research it was found that the transparency of the programs within the two investigated countries differs very much. Despite FONAFIFO's aim to be transparent about all their activities it was found that their programs were very difficult to fathom due to contradictory information from different resources. On the contrary to the Dutch policy arrangement, the Costa Rican policy arrangement appeared to be very opaque. The Dutch programs were found to be much more transparent and consistent about the information that is

communicated. The fact that the Dutch policy arrangement is so much more transparent could be explained through the fact that two of these programs are members of knowledge platforms that demand a high level of transparency in order to be admitted.

Table 6.2 Conclusions

	Costa Rica	**Netherlands**
Actors and Coalitions	*High governmental interference*	*Low governmental interference*
	Intermediaries not generally used	*Travel agencies as intermediaries*
Resources	*External financial support*	*Only TfT received subsidy*
Rules of the Game	*Only forest projects*	*Mainly Energy projects*
	All calculation mechanisms based on IPCC	*Only CO2ZERO based on IPCC*
Discourses	*Focus on carbon-neutrality*	*Focus on climate-neutrality*
	Forests for climate compensation	*Energy and forests for climate compensation*
	Economic- and ecological sustainability mutually exclusive	*All sustainability aspects mutually enforcing*
General conclusion	*Opaque*	*Transparent*

6.1.2   Connection First and Second Level Discourses

In the introduction an overview was given on the current debates on climate change and climate compensation programs as a way to reduce the negative effects of climate change. The dominant discourse in the debates on carbon sequestration and the use of compensation programs is based on the need for CO_2 reduction in the atmosphere. When relating this to the second level discourses that were found in Chapter 1, it can be seen that there are two discourses that relate to the first level discourse of CO_2 reduction, which are the carbon-neutrality discourse and the climate-neutrality discourse. Both these discourses relate to the reduction of CO_2 and/or CO_2-equivalents in the atmosphere. In this it needs to be noted that in the global debates on carbon sequestration and -compensation, the term carbon is often used in its broadest sense and leaves it open to speculation on whether they talk only about carbon or also include other greenhouse gasses.

Furthermore there is the belief in certain types of projects that should be used for the sequestration of greenhouse gasses. This is reflected in the differences that were found between the two countries in that the Dutch programs seem to have a preference for energy projects, whereas the Costa Rican programs currently only have forest projects in their portfolio. The distinction between these two types of projects is also found in the global debates about sequestration and compensation, and even seems to be what the whole debate is about.

6.2   Discussion

The debates around the issue of human induced climate change circles around three lines of thought. Sudhakara Reddy and Assenza (2009) distinguish between supporters, sceptics and realists of the theory that climate change is anthropogenic. As described in Chapter 1, the supporters believe in anthropogenic climate change and the need to act now in order to mitigate the negative effects of it. The sceptics, on the other hand, claim that climate change is mainly caused by natural processes and that no action is needed. The last of these three groups does believe in human induced climate change but opposes the actions that taken currently to address the problems of climate change. Relating this back to the results of this research it can be concluded that the climate compensation programs are all supporters of the theory that climate change is human induced and that they are partly responsible for taking actions to battle the negative effects of climate change. This is thus done by offering the polluter a chance to reduce the carbon footprint they would have

left behind otherwise. Sukhakara Reddy and Assenza (2009) also distinguish between three types of policy response to climate change, of which the climate compensation programs hook in on focused intervention. Focused intervention is based on the will of institutions to minimize the negative impacts of climate change (for the other policy responses, see Chapter 1). Within the line of thought of the supporters group three type of action categories are found. The climate compensation programs can be categorized under the economic instruments that are used to mitigate climate change. The two other categories, being command and control mechanisms and fundamental transformation of society are not suitable for the climate compensation programs that clearly use the market as a playground for the selling of carbon credits and as such are economic instruments.

Within the group of climate realists there is the believe that economic development should stand at the basis climate change mitigation and that as a result sustainable development is the only option to achieve something. In order to do so Suhakara Reddy and Assenza (2009) propose to create no-regrets (or win-win) outcomes of two types, being financial- or economic win-win. Climate compensation programs could be able to provide either one of these outcomes by using economic resources from the market that are diverted into the local projects that produce the carbon credits that are sold on the market. When connecting the local communities to the carbon projects, the carbon credits could work as a pro-poor instrument and as such create win-win outcomes for both the developed countries who compensate for their emissions, and the local people in the developing countries where the projects are situated by diversifying their local economy. This is what Trees for Travel tries to do with their projects and as such aim at making pro-poor carbon credits a reality for poor local communities in the developing world. By doing so this program puts human development at the basis for climate mitigation.

Another issue that was mentioned in the introduction section of this report, is the observation of other researchers that the voluntary carbon market is rather fuzzy and opaque. When doing research on the climate compensation programs in Costa Rica it was found to be very difficult to grasp the whole system that is used to compensate for greenhouse gas emissions. The Dutch compensation programs proved to be more transparent, but still it can be argued that for a lay person (the average customer of climate compensation programs) it is very difficult to determine the actual differences between the programs without losing himself in different standards and external audits that should prove the program in question to be credible, and as such to make a well considered choice based on understandable facts. In conclusion this research supports the findings of other who have argued for the need of international standards for climate compensation programs (see Eijgelaar, 2009; Gössling, et al., 2007; Strasdas, 2007).

Gössling et al. (2007) found that less than 25% of the by them investigated programs included energy projects in their portfolio. When relating that to the findings of this research it can be concluded that a lot has changed since their study. These changes have mainly occurred within the Dutch programs with two out of the three projects deliberately do not chose to include forest projects in their portfolio, with Trees for Travel being the only program that has both energy and forest projects included. This could indicate that energy projects have become increasingly popular among climate compensation programs, but no real evidence is found with this small amount of programs in the Netherlands that have been researched. In Costa Rica the three programs all focus on only forest projects with one aiming to include energy projects by 2012. This shows that the programs here do comply to the findings of Gössling et al. Further research on this could provide for interesting outcomes to see whether there is a shift taking place from biological sinks towards sustainable energy for mitigating climate change.

In Costa Rica the programs under investigation can be seen as being both the offset organization and the retailer to sell the (by them) produced carbon credits. In the Netherlands, however the programs do not produce their own credits, but they serve as a retailer for carbon producers (offset organizations) to sell the credits on the market. CO2ZERO buys its credits from the Gold Standard and as such the latter is the retailer and CO2ZERO can be qualified as a compensation broker who mediates between the seller of the credits (the Gold Standard) and their own costumers.

Within the context of PAA it was found that political modernization can play a role in institutions and as such in the policy arrangements that were investigated. This research has found some evidence for that through the differences in governmental involvement between the programs in the developing country (Costa Rica) and the developed country (the Netherlands). In the Netherlands the compensation programs are much more based on governance and accordingly hardly any involvement of the government was found. It is clear that the Dutch government wants the market to pick up the opportunity to involve itself in climate mitigation and that control and command mechanisms are not the path they want to take. Recent developments, however, are the calls from the market that the government should also take its responsibility and that less voluntary and more command and control mechanisms are needed to get rid of the voluntary approach that is used currently. In 2009 the EU has decided to include aviation in the Emissions Trading System and from 2012 on the aviation industry has to comply to goals of emission reductions that are set by the EU (The European Parliament and the Council of the European Union, 2008). In Costa Rica the government is not always involved in an obvious way, but by having a state university as the largest stakeholder in the so called 'private' compensation program, there is still a strong influence that appears to be based on governance, but that is probably still very much based on the government's will. All in all it can be concluded that also within the field of climate compensation governance is playing a role, and that the role of governments is increasingly challenged and changed due to dynamics from within the programs and the other way around.

The Policy Arrangement Approach has offered the possibility to unfold and understand the dimensional processes of climate compensation programs in Costa Rica and the Netherlands, and to link these processes with the current debates on climate change and climate compensation. The typologies that have been assigned to the two countries show mixed typologies. For the Costa Rica the typology was rather useful since it reflected one of the ideal types in all characteristics, with a small sidestep to another ideal type in two characteristics. For the Dutch policy arrangement the typology was not very useful since out of the four ideal types, three were reflected in the arrangement, and as such no specific typology could be assigned to this arrangement. Overall it was found that the method of the typology can be useful to gain an insight in the level of governance that is at work in the policy arrangement, but that it can be very difficult to assign a particular ideal type to a policy arrangement.

6.3   Recommendations

This research has only sought to compare different climate compensation programs in two totally different countries and to see what the main differences and similarities between these countries are. It did not pay much attention to the efficiency and contribution of the programs to climate change mitigation. In addition it proved to be very difficult to obtain good information on the efficiency and contribution to climate change mitigation of -mainly- the Costa Rican programs. Consequently there is still data missing on this topic. Future research could address this, and investigations on each specific program could give more in-depth insights into the programs and investigate to what extent the programs actually contribute to climate change mitigation and carbon

sequestration. Furthermore the research stumbled upon the inconsistency between FONAFIFO's claims of running CDM sequestration projects and the CDM listing of projects in Costa Rica that did not include any of the FONAFIFO projects. Further research on this could provide a better insight in FONAFIFO's communication about these so called CDM projects and the actual relationship with CDM. Another interesting question can be raised in relation to the discourses on carbon-neutrality and climate-neutrality. Why does this difference exist, and how were these different discourses formed in the first place? It is clear that both discourses are build upon the belief that greenhouse gasses should be sequestered from the atmosphere, but why does one discourse choose to only include carbon dioxide in the sequestration efforts and the other to include all anthropogenic greenhouse gasses?

Aside from the above recommendations for future research there are also some practical recommendations that can be done in order to improve managerial processes. A first practical recommendation that can be done is related to the use of intermediaries. For the Costa Rican programs it could be worthwhile to consider the use of intermediaries in order to increase participation in the programs. These intermediaries can not only be approached as an intermediary, but can also be a participant. In doing so the program can hit two birds with one stone. For Trees for Travel it is recommended to be more active in approaching current intermediaries that do not compensate for their own emissions and to convince them of their own responsibilities to give a good example to their clients, and as such to become more credible. In order to become more transparent FONAFIFO could think about their current communication policy about Clean Trip, and as such their carbon compensation programs. The current communication of Clean Trip also includes the compensation of emissions that are created with domestic activities, whereas it in reality only compensates for emissions that are created on international flights to and from Costa Rica. The domestic activities are not compensated through Clean Trip, but trough another program that is never mentioned in communication towards national companies. If done in a well-thought manner, FONAFIFO could present their programs by clearly communicating the existence of the two different programs for different activities, and as such different target groups. In doing so the marketing and promotion could be much more directed to the specific target groups, and consequently become more transparent and functional.

References

Arts, B., & Buizer, M. (2008). Forests, discourses, institutions, Forest Policy and Economics.

Arts, B., & Leroy, P. (2006). *Institutional dynamics in environmental governance*. Dordrecht: Springer.

Arts, B., & Tatenhove, J. (2006). Political Modernisation *Institutional Dynamics in Environmental Governance* (pp. 21-43).

Ashoka (2009). Ashoka Fellows, Laura Lang Retrieved January 19, 2010, from http://www.ashoka.org/node/5476

Becken, S. (2004). How Tourists and Tourism Experts Perceive Climate Change and Carbon-offsetting Schemes. *Journal of Sustainable Tourism, 12*(4), 332 - 345.

Biénabe, E., & Hearne, R. R. (2006). Public preferences for biodiversity conservation and scenic beauty within a framework of environmental services payments. *Forest Policy and Economics, 9*(4), 335-348.

Bohdanowicz, P., & Zientara, P. (2008). Corporate Social Responsibility in Hospitality: Issues and Implications. A Case Study of Scandic. *Scandinavian Journal of Hospitality and Tourism, 8*(4), 271 - 293.

Boon, B., Schroten, A., & Kampman, B. (2007). Compensation Schemes for Air Transport. In P. Peeters (Ed.), *Tourism and Climate Change Mitigation. Methods, greenhouse gas reductions and policies* (Vol. 6). Breda: Stichting NHTV Breda.

Boyer, W. W. (1990). Political Science and the 21st Century: From Government to Governance. *PS: Political Science and Politics, 23*(1), 50-54.

Buizer, M. (2008). *Worlds Apart. Interactions between Local Initiatives and Established Policy.* Wageningen UR, Wageningen.

Business Monitor International (2009, December 23). Costa Rica Tourism Report Q1 2010 Retrieved January 15, 2010, from http://www.marketresearch.com/product/display.asp?productid=2529565&g=1

Climate Neutral Group (2009a). Green Seat Retrieved January 9, 2010, from http://www.greenseat.nl/Default.aspx?lang=NL

Climate Neutral Group (2009b). Green Seat, Ambitie Retrieved January 9, 2010, from http://www.greenseat.nl/ShowContent.aspx?page=Our+Ambitions&lang=NL

Climate Neutral Group (2009c). Green Seat, Bereken uw CO2 Uitstoot Retrieved January 11, 2010, from http://www.greenseat.nl/ShowContent.aspx?page=Bereken+uw+CO2+uitstoot&lang=NL

Climate Neutral Group (2009d). Green Seat, Info Projectontwikkelaren Retrieved January 11, 2010, from http://www.greenseat.nl/ShowContent.aspx?page=Info+projectontwikkelaren&lang=NL

Climate Neutral Group (2009e). Green Seat, Onafhankelijke Controle Retrieved January 11, 2010, from http://www.greenseat.nl/ShowContent.aspx?page=Onafhankelijke+controle&lang=NL

Climate Neutral Group (2009f). Green Seat, Onze Diensten Retrieved January 11, 2010, from http://www.greenseat.nl/ShowContent.aspx?page=Our+Services&lang=NL

Climate Neutral Group (2009g). Green Seat, Onze Projecten Retrieved January 9, 2010, from http://www.greenseat.nl/ShowContent.aspx?page=Algemene+info&lang=NL

Climate Neutral Group (2009h). Green Seat, Organisatie Retrieved Janurary 9, 2010, from http://www.greenseat.nl/ShowContent.aspx?page=Our+Organisation&lang=NL

Climate Neutral Group (2009i). Green Seat, Strenge Kwaliteitscriteria Retrieved January 11, 2010, from http://www.greenseat.nl/ShowContent.aspx?page=Strenge+kwaliteitscriteria&lang=NL

Climate Neutral Group (2009j). *Jaarboek Climate Neutral Group 2008*: Climate Neutral Group.

Climate Neutral Group (2010a). GreenSeat Supporters Retrieved January 19, 2010, from http://www.greenseat.nl/Customers.aspx?lang=NL

Climate Neutral Group (2010b). Overzicht Reisagenten Retrieved January 19, 2010, from http://www.greenseat.nl/StartPage.aspx?lang=NL

Cole, S., & Razak, V. (2009). Tourism as future. *Futures, 41*(6), 335-345.

Dodds, R., & Joppe, M. (2005). *CSR in the Tourism Industry? The Status of and Potential for Certification, Codes of Conduct and Guidelines*: CSR Practice Foreign Investment Advisory Service Investment Climate Department.

Duim, R. v. d. (2005). Tourismscapes, an actor-network perspective on sustainable tourism developmentpp. 284).

Eijgelaar, E. (2009). Voluntary carbon offsets a solution for reducing tourism emissions? Assessment of communication aspects and mitigation potential.

FONAFIFO (2006). Oferta de Proyectos de "Absorción de CO2 a través de actividades de aforestación /reforestación dentro del Mecanismo de Desarrollo Limpio". Retrieved February 3, 2010, from http://www.fonafifo.go.cr/paginas_espanol/noticias/e_nt_noti001.htm

FONAFIFO (2007a). Acerca del FONAFIFO Retrieved February 8, 2010, from http://www.fonafifo.go.cr/paginas_espanol/fonafifo/e_fo_acerca.htm

FONAFIFO (2007b). CSA Socios Inversionistas Retrieved January 19, 2010, from http://www.fonafifo.go.cr/paginas_espanol/invierta_bosques/e_ib_que_es_csa.htm

FONAFIFO (2007c). Environmental Service Certificate - Clean Travel Retrieved September 18, 2009, from http://www.fonafifo.com/paginas_english/invest_forest/i_ib_viaje_limpio.htm

FONAFIFO (2007d). Invest in Forest Retrieved February 3, 2010, from http://www.fonafifo.com/paginas_english/invest_forest/i_ib_que_es_csa.htm

FONAFIFO (2007e). Para recuperar y proteger los bosques y la biodiversidad de Costa Rica! Retrieved January 19, 2010, from http://www.fonafifo.go.cr/paginas_espanol/invierta_bosques/e_ib_bosque_vivo.htm

FONAFIFO (2007f). Reactivación de la Reforestación Comercial en Costa Rica (REFORESTA) Retrieved February 12, 2010, from http://www.fonafifo.com/text_files/proyectos/pr_reforesta.pdf

Friends of the Earth International, & Global Forest Coalition (2005). The new markets 1: selling our carbon, *Nature for Sale* (pp. 12). Montreal.

Global Environment Facility (2007). Global Environment Facility: Investing in our Planet. What is the GEF? Retrieved October 15, 2009, from http://www.thegef.org/interior_right.aspx?id=50

Gold Standard Foundation (n.d.). Portfolio Pledge Agreement. Geneva-Cointrin, Switzerland.

Gössling, S., Broderick, J., Upham, P., Ceron, J.-P., Dubois, G., Peeters, P., et al. (2007). Voluntary Carbon Offsetting Schemes for Aviation: Efficiency, Credibility and Sustainable Tourism. *Journal of Sustainable Tourism, 15*(3), 223 - 248.

GösslingLaw, S., & Peeters, P. (2007). ˜It Does Not Harm the Environment! An Analysis of Industry Discourses on Tourism, Air Travel and the Environment. *Journal of Sustainable Tourism, 15*(4), 402 - 417.

Howlett, M., Rayner, J., & Tollefson, C. (2009). From government to governance in forest planning? Lessons from the case of the British Columbia Great Bear Rainforest initiative.

KLM (2008a). *Calculation Methodology of KLM's CO2 Calculator*: KLM.

KLM (2008b). *Towards Smart Leadership, KLM Annual Review 07/08*: KLM.

Kollmuss, A., Zink, H., & Polycarp, C. (2008). *Making Sense of the Voluntary Carbon Market. A Comparison of Carbon Offset Standards*: Stockholm Environment Institute, Tricorona.

Lemos, M. C., & Agrawal, A. (2006). Environmental Governance. *Annual Review of Environment and Resources, 31*(1), 297-325.

Liefferink, D. (2006). The Dynamics of Policy Arrangements: Turning Round the Tetrahedron *Institutional Dynamics in Environmental Governance* (pp. 45-68).

Mendelsohn, R., Dinar, A., & Williams, L. (2006). The distributional impact of climate change on rich and poor countries. *Environment and Development Economics, 11*(02), 159-178.

Miller, R. (2008). Firm Tourism Demand - Advanced Results, World Tourism Barometer June 2008 Retrieved September 8, 2009, from http://www.tourismroi.com/InteriorTemplate.aspx?id=27670

Nature Air (n.d.). Frequently Asked Questions Retrieved January 19, 2010, from http://www.natureair.com/carbonneutral/faq.html#

Odera, M. M., & Kimani, S. K. (2004). *Payments for Environmental Services under Emerging International Agreements: A Basis for Inclusion of Agricultural Soil Carbon Sinks*. Paper presented at the 2004 Inaugural Symposium, December 6-8, 2004. from http://ideas.repec.org/p/ags/aaaeke/9539.html

Pagiola, S. (2008). Payments for environmental services in Costa Rica. *Ecological Economics, 65*(4), 712-724.

Paz Con La Naturaleza: Plan de Acción (2008). from http://www.pazconlanaturaleza.org/admin/descargas/upload/Plan%20Accion%20IPN.pdf.

Porras, I., Neves, N., & Miranda, M. (2006). *Developing Markets for Watershed Protection Services and Improved Livelihoods" IIED Technical Trip Active Learning From Costa Rica's Payment for Environmental Services*: Institute for International Environment and Development.

Programa de Aliados Cambio Climatico (2009). Tree Distribution Retrieved January 7, 2010, from http://www.programaacc.com/app/cms/www/index.php?id_menu=65

Programa de Aliados Cambio Climatico (n.d.-a). Neutralizando El Cambio Climático, How we work Retrieved January 19, 2010, from http://www.programaacc.com/app/cms/www/index.php?id_menu=75

Programa de Aliados Cambio Climatico (n.d.-b). Simple Actions, Great Contributions Retrieved April 1, 2010, from http://www.programaacc.com/app/cms/www/index.php?locale=en-US&id_menu=5

Programa de Aliados Cambio Climático (2009). Neutralizando el Cambio Climático. San Jose.

Rodríguez, J. M. (n.d.). Fondo Nacional de Financiamiento Forestal FONAFIFO. Farms in the Brunca Region, Costa Rica (FONAFIFO-CoopeAgri Project). San José, Costa Rica: FONAFIFO.

Rodríguez, J. M., Toruño, E., Sáenz, A., Hernández, G., & Amighetti, A. (2005). *Más de una década de acción*.

Rodríguez Quirós, J. (2009). *Memoria Anual 2008/ 2009*.

Rodríguez Zúñiga, J. M. (2003). Paying for forest environmental services: the Costa Rican experience. *Unasylva, 53*(212), 31-33.

Sánchez-Azofeifa, G. A., Pfaff, A., Robalino, J. A., & Boomhower, J. P. (2007). Costa Rica's Payment for Environmental Services Program: Intention, Implementation, and Impact. *Conservation Biology, 21*(5), 1165-1173.

Sierra, R., & Russman, E. (2006). On the efficiency of environmental service payments: A forest conservation assessment in the Osa Peninsula, Costa Rica. *Ecological Economics, 59*(1), 131-141.

Spinetta, J.-C. (2009). *Air France-KLM Corporate Social Responsibility Report 2008-09*. Roissy CDG Cedex & Schiphol: Air France-KLM.

Spinetta, J.-C., & Van Wijk, L. (2006). Air France KLM Corporate Social Responsibility Statement. Paris & Amsterdam: Air France - KLM.

Stein, J. (2009a). Costa Rica, Climate Conscious Travel *Costa Rica Sustainable Tourism Guidebook*: CANAECO.

Strasdas, W. (2007). Voluntary Offsetting of Flight Emissions: An Effective Way to Mitigate the Environmental Impacts on Long-Haul Tourism: February.

Sudhakara Reddy, B., & Assenza, G. B. (2009). The great climate debate. *Energy Policy, 37*(8), 2997-3008.

Directive 2008/101/EC of the European Parliament and of the Council. Amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas

emission allowance trading within the Community (2008).

Trees for Travel (2007). *Trees for Travel Stichting. CO² als Cadeautje: Jaarverslag 2007*. Dieren: Trees for Travel.

Trees for Travel (2009). Informatieset Trees for Travel (pp. 28). Dieren: Trees for Travel.

Trees for Travel (2010a). Background and Aims/ Achtergrond en doel Retrieved January 19, 2010, from http://www.treesfortravel.info/

Trees for Travel (2010b). Participants, Partners and Intermediaries Trees for Travel. In Deelnemers & Partners Trees for Travel (Ed.), *Microsoft Excel*. Dieren: Trees for Travel.

Trees for Travel (2010c). Trees for Travel Retrieved January 6, 2010, from http://www.treesfortravel.nl/

Trees for Travel (n.d.). Herstel Natuurparken in Oeganda Retrieved January 20, 2010, from http://www.treesfortravel.nl/

UNFCCC (2009, December 7-18). *Copenhagen Accord.* Paper presented at the Conference of the Parties, Fifteenth Session, Copenhagen.

UNFCCC (2010, February 8). Registered Project Activities by Host Party Retrieved February 12, 2010, from http://cdm.unfccc.int/Statistics/Registration/NumOfRegisteredProjByHostPartiesPieChart.html

UNFCCC, & CDM Executive Board (2009). Annex 3: Clean Development Mechanism Validation and Verification Manual, *Fifty-First Meeting of the Executive Board of the Clean Development Mechanism* (Vol. 30 November - 4 December 2009, pp. CDM-EB-51). 4 December 2009: Copenhagen, Denmark.

UNWTO (n.d.). World Tourism Organization: Facts and Figures: Tourism 2020 Vision Retrieved September 8, 2009, from http://www.unwto.org/facts/menu.html

Vargas, A. (2008, November 17). 125 Hectáreas se Reforestan Gracias a Pago de 'Viajes Limpios'*. Nacion.com*. from http://www.nacion.com/ln_ee/2008/noviembre/17/aldea1778022.html.

Wunder, S. (2005). *Payments for Environmental Services: Some Nuts and Bolts*. Jakarta: Center for International Forestry Research.

Zellmer, K. (still in progress). Wageningen UR.

Glossary

Afforestation:	'Planting of new forests on lands that historically have not contained forests.' ***Source: http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_appendix.pdf***
Agro forestry:	'A system of land use in which harvestable trees or shrubs are grown among or around crops or on pastureland, as a means of preserving or enhancing the productivity of the land.' ***Source: http://www.thefreedictionary.com/agroforestry***
Annex I countries:	'The group of countries included in Annex I (as amended in 1998) to the *United Nations Framework Convention on Climate Change (UNFCCC)*, including all the OECD countries in the year 1990 and countries with economies in transition. Under Articles 4.2 (a) and 4.2 (b) of the Convention, Annex I countries committed themselves specifically to the aim of returning individually or jointly to their 1990 levels of *greenhouse gas* emissions by the year 2000. By default, the other countries are referred to as **Non-Annex I countries.' For a list of Annex I countries, see http://unfccc.int/parties_and_observers/parties/annex_i/items/2774.php. Source: http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_appendix.pdf**
Atmosphere:	'The gaseous envelope surrounding the Earth. The dry atmosphere consists almost entirely of nitrogen and oxygen, together with trace gases including carbon dioxide and ozone.' ***Source: http://www.ipcc.ch/pdf/glossary/ar4-wg2.pdf***
Carbon dioxide (CO_2):	'A naturally occurring gas, also a by-product of burning fossil fuels from fossil carbon deposits, such as oil, gas and coal, of burning biomass and of land use changes and other industrial processes. It is the principal anthropogenic greenhouse gas that affects the Earth's radiative balance. It is the reference gas against which other greenhouse gases are measured and therefore has a Global Warming Potential of 1.' ***Source: http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_appendix.pdf***
Carbon (CO_2) sequestration:	'The process of increasing the carbon content of a carbon reservoir other than the atmosphere. Biological approaches to sequestration include direct removal of carbon dioxide from the atmosphere through land-use change, afforestation, reforestation and practices that enhance soil carbon in agriculture.' ***Source: http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_appendix.pdf***
Certified Emission Reduction (CER) Unit:	'Equal to one tonne (metric ton) of CO_2-equivalent emissions reduced or sequestered through a Clean Development Mechanism project, calculated using Global Warming Potentials.' ***Source: http://www.ipcc.ch/pdf/glossary/ar4-wg3.pdf***
Clean Development Mechanism (CDM):	'The CDM allows *greenhouse gas* emission reduction projects to take place in countries that have no emission targets under the *United Nations Framework Convention on Climate Change* (UNFCCC) Kyoto Protocol, yet are signatories.' ***Source: http://www.ipcc.ch/pdf/glossary/ar4-wg2.pdf***
Climate Change:	'Climate change refers to any change in *climate* over time, whether due to natural variability or as a result of human activity. This usage differs from that in the *United Nations Framework Convention on Climate Change (UNFCCC)*, which defines 'climate change' as: 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global *atmosphere* and which is in addition to natural climate variability observed over comparable time periods''.' ***Source: http://www.ipcc.ch/pdf/glossary/ar4-wg2.pdf***
CO_2-equivalent emission:	'The amount of CO_2 emission that would cause the same *radiative forcing* as an emitted amount of a well mixed greenhouse gas, or a mixture of well mixed greenhouse gases, all multiplied with their respective Global Warming Potentials to take into account the differing times they remain in the atmosphere.'

	Source: http://www.ipcc.ch/pdf/glossary/ar4-wg3.pdf
Discourse	'a specific ensemble of ideas, concepts, and categorizations that are produced, reproduced and transformed in a particular set of practices and through which meaning is given to physical and social realities' (Hajer 1995 in (Buizer, 2008, p. 23))
FONAFIFO (Fondo Nacional de Financiamento Forestal):	National Fund for Forest Financing in Costa Rica that was established in 1996 by the Costa Rican government under Forest Law No.7575 that administers the Payments for Environmental Services. *Source: Pagiola, 2008 and Sánchez-Azofeifa, 2007*
Forest:	'Defined under the Kyoto Protocol as a minimum area of land of 0.05-1.0 ha with tree-crown cover (or equivalent stocking level) of more than 10-30 % with trees with the potential to reach a minimum height of 2-5 m at maturity in situ. A forest may consist either of closed forest formations where trees of various storey and undergrowth cover a high proportion of the ground or of open forest. Young natural stands and all plantations that have yet to reach a crown density of 10-30 % or tree height of 2-5 m are included under forest, as are areas normally forming part of the forest area that are temporarily un-stocked as a result of human intervention such as harvesting or natural causes but which are expected to revert to forest.' See also *Afforestation* and *Reforestation*. *Source: http://www.ipcc.ch/pdf/glossary/ar4-wg3.pdf*
Global Environmental Facility (GEF)	'The Global Environment Facility (GEF), established in 1991, helps developing countries fund projects and programs that protect the global environment. GEF grants support projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants.' *Source: http://www.ipcc.ch/pdf/glossary/ar4-wg3.pdf*
Greenhouse gases (GHGs):	'Greenhouse gases are those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by the Earth's surface, the atmosphere and clouds. This property causes the greenhouse effect. Water vapour (H_2O), carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4) and ozone (O_3) are the primary greenhouse gases in the earth's atmosphere. Moreover, there are a number of entirely human-made greenhouse gases in the atmosphere, such as the halocarbons and other chlorine and bromine-containing substances, dealt with under the Montreal Protocol. Besides carbon dioxide, nitrous oxide and methane, the Kyoto Protocol deals with the greenhouse gases sulphur hexafluoride, hydrofluorocarbons, and perfluorocarbons.' *Source: http://www.ipcc.ch/pdf/glossary/ar4-wg3.pdf*
Kyoto Protocol:	'The Kyoto Protocol to the *United Nations Framework Convention on Climate Change (UNFCCC)* was adopted in 1997 in Kyoto, Japan, at the Third Session of the Conference of the Parties (COP) to the UNFCCC. It contains legally binding commitments, in addition to those included in the UNFCCC. Countries included in *Annex B* of the Protocol (most Organization for Economic Cooperation and Development countries and countries with economies in transition) agreed to reduce their anthropogenic greenhouse gas emissions (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride) by at least 5% below 1990 levels in the commitment period 2008 to 2012. The Kyoto Protocol entered into force on 16 February 2005.' *Source: http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_appendix.pdf*

Millennium Development Goals (MDG):	'A set of time-bound and measurable goals for combating poverty, hunger, disease, illiteracy, discrimination against women and environmental degradation, agreed at the UN Millennium Summit in 2000.' *Source: http://www.ipcc.ch/pdf/glossary/ar4-wg3.pdf*
MINAET:	Costa Rican ministry of environment, energy, and telecommunication. 'MINAET, in accordance with the legal system, is responsible for issuing national environmental policies, regulations and administration regarding the following areas: environment, energy, water resources, mining, oil and the fuels, forests, protected wilderness areas, biological corridors, conservation and wildlife management, biodiversity, marine resources in areas protected wildlife, environmental services, watershed, wetlands and mangroves, meteorological and oceanographic services, international marketing, emission reductions of greenhouse gases, conservation of clean air and any other natural resources in accordance with existing rules.' *Source: (Rodríguez Quirós, 2009 my translation)*
Mitigation:	'A human intervention to reduce the sources or enhance **the sinks of greenhouse gases.'** *Source: http://www.ipcc.ch/pdf/glossary/ar4-wg1.pdf*
Non-governmental Organisation (NGO):	'A non-profit group or association organised outside of institutionalised political structures to realise particular social and/or environmental objectives or serve particular constituencies.' *Source: http://www.edu.gov.nf.ca/curriculum/teched/resources/glos-biodiversity.html in http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_appendix.pdf*
Non-Annex I countries:	'Those developing countries without a binding GHG emissions reduction commitment under the Kyoto Protocol. Non-Annex I countries are expected to receive technology transfer and financial assistance from Annex II countries to help them achieve emissions reductions in the absence of a binding commitment.' *Source: http://www.carbon-clear.com/uk/projects.php?page=jargon*
Reforestation:	'Planting of forests on lands that have previously contained forests but that have been converted to some other use.' *Source: http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_appendix.pdf*
SINAC (Sistema Nacional de Areas de Conservación):	The National System for Conservation Areas is a Costa Rican governmental department under MINAET that is responsible for the care of the national park system. They do so in order to dictate policy, planning and implementing processes aimed at achieving sustainability in natural resource management in Costa Rica. *Source: http://www.sinac.go.cr/informacion.php*
SIReFOR (Sistema de Información de Recursos Forestales)	Information System of Forests (SIReFOR) is an initiative of the National Forestry Development Plan of Costa Rica (PNDF), which aims to gather and manage relevant information on forest resources and be able to reflect the real contribution of the various activities sector in the economy and the society. *Source: http://www.sirefor.go.cr/acercadelsirefor.html*
Sustainable development:	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Tourism related organization:	An organization that offers accommodation, transportation, or recreational activities either as a package or as a single product/service to tourists.
Tropical Agricultural Research and Higher Education Center (CATIE):	Regional centre for academic training, technical cooperation and research in tropical agriculture in Latin America and the Caribbean. The organization envisions to contribute to rural poverty reduction by promoting competitive and sustainable agriculture and natural resource management, through higher education, research and technical cooperation. *Source: http://www.catie.ac.cr/BancoMedios/Documentos%20PDF/plegable_institucional.pdf*
United Nations Framework Convention on Climate Change (UNFCCC):	'The Convention was adopted on 9 May 1992 in New York and signed at the 1992 Earth Summit in Rio de Janeiro by more than 150 countries and the European Community. Its ultimate objective is the 'stabilisation of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'. It contains

	commitments for all Parties. Under the Convention, Parties included in Annex I aim to return GHG emissions not controlled by the Montreal Protocol to 1990 levels by the year 2000. The Convention entered into force in March 1994.' *Source: http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_appendix.pdf*
Verified Emission Reduction Unit (VER):	'A carbon credit created by a project which has been verified outside of the Kyoto Protocol. One VER corresponds to one tonne of CO2e emission reductions.' *Source: http://www.carbonneutral.com/knowledge-centre/carbon-glossary/*

Annex 1: List of Interviewees

Name interviewee	Organization	Interview date
Allen Cordero	FLACSO	03-11-2009
Guillermo Canessa	UTUR	04-11-2009
Pedro León	Governmental program Paz con la Naturaleza	05-11-2009
Jürgen Stein	CANAECO/Selva Bananito Ecolodge	09-11-2009 22-12-2009
Alberto García	FONAFIFO	16-11-2009
Jackeline López	Mapache Rent a Car (user FONAFIFO mechanism)	11-11-2009
Mr. Solís	Sansa Regional Air (user FONAFIFO mechanism)	13-11-2009
Patricia Forero	Horizontes Nature Tours (user FONAFIFO mechanism and ACC)	16-11-2009
Patricia Duar	ACOPROT (user FONAFIFO mechanisms)	10-11-2009
Janjoris van Diepen	Trees for Travel	20-01-2010, by telephone
Sjaak de Ligt	Trees for Travel	27-01-2010, by telephone
Vitas Kersbergen	Green Seat	27-01-2010, by telephone
Jaap van de Berg	CO2ZERO	29-01-2010 18-02-2010 29-03-2010, All by telephone

Annex 2: Elements of Comparison Compensation Programs

Organization:	
Representative:	
Function:	
Post address:	
Telephone:	
Web:	

Actors
1. Who is/are the initiator(s):
2. Partnerships:
3. Which target Group:
4. How many agencies offer Trees for Travel compensation:
5. Which agencies offer Trees for Travel compensation:
6. How many participants compensated:
7. Who compensated (if organizations):
8. With which goals/purpose developed:
9. National or international/scope:
10. How are the other initiatives seen/what special about their program? And what is their mutual relation:

Division of resources
1. How much of the donated money is invested directly in projects (%):
2. Additional financial resources besides the target group donors:
3. Division of money (type of projects):
4. Distribution of money (location wise):
5. Distribution of knowledge:
6. Distribution of decisional power:

Rules of the game
1. How to take part in the programs (as a donor)→ *The procedures of taking part in the program as a donor are split up per target group.*
    o *Individuals (eg. Travelers):*
    o *Companies:*
    o *Travel agencies:*
2. How to apply for support of the programs (as receiver of money/support):
3. Type of contracts/arrangements involved for both the donors and receivers →
    o *Donors:*
    o *Projects:*
4. Calculation mechanism used:
5. Which generators of CO_2 compensated:
6. Quality ensured/controlled by:

Discourses
Which shared ideas come up on a regularly basis in any form of communication of the program and how can these ideas be formulated in a discourse.

Annex 3: Participating Organizations FONAFIFO

Participant Organizations

1. Florida Bebidas
2. Empresa de Servicios Publicos de Heridia
3. Hidroeléctrica Planatar
4. Enel
5. Compañía Nacional de Fuerza y Luz
6. ASOFIFO
7. Milenio, Comunicación Integral
8. Ing. Edgar Ortíz Malavassi
9. Azucarera el Viejo
10. Grupo OLEFINAS Costa Rica
11. Costeña
12. Exporpack
13. Holcim
14. Lifegate
15. Nature Air
16. Hidroeléctrica Aguas Zarcas
17. Reserva CONCHAL
18. Hidroeléctirca TUIS
19. Agricola TAYUTIC
20. Federación Costarricense de Futbol
21. Tribu NAZCA SAATCHI & SSATCHI
22. Team CRT
23. Horizontes Nature Tours Costa Rica
24. CoopeAgri R.L.
25. ICE
26. Sansa Regional
27. Mapache Rent a Car
28. PAX Natura
29. CEMEX
30. Los Sueños, Costa Rica Resort Marriot
31. Consultora Tecnica BIOFISICA A&A
32. COOPELESCA;
33. COOPEGUANACASTE R.L.
34. Adobe Rent a Car
35. Ecología y Dessarollo
36. Dole
37. Interbus
38. Alianza para la Nueva Humanidad
39. Playa Nicuesa Rainforest
40. Travel Excellence
41. CANATUR
42. Budget Car Rental
43. Europcar
44. Empresa Internacional de Comercio S.A.
45. Alamo
46. National
47. Expotur
48. ACOPROT
49. Marriott Costa Rica San José
50. EmilCeramica

Source: FONAFIFO, 2007a

Annex 4: Financial Resources FONAFIFO in 2004

Source	Period	Approximate amount
State resources (approximately US$ 3.5 million/year		
Fuel Tax	1997-indefinite	App. US3.5 million/year
40% of the stumpage tax revenues (timber)	1998 (the only year when funds were received, after this it was legally challenged and stopped);	App. US$0.15 million. These funds were recirculated as loans and by 2004 their value is US$0.23 million.
Agreements with private corporations (Approximately US$560,000 per year)		
Energía Global HEP	1997 –onwards (renewable 5-year contracts)	US$40,000/year;
National Power and Lighting company (CNFL)	1998-onwards (renewable 5-year contracts)	US$436,000/year
Platanar HEP	1999-onward (renewable 10-year contracts)	US$39,000/year
Florida ICE& FARM (brewery)	2001-2009 (initial contract for 8 years, renewable)	US$45,000/year
Loans, grants, and market instruments (Approximately US$9.35 million /year)		
Ecomarkets (World Bank)	2000-2005 (second phase entering now)	US$ 8 million/year (total 40 million)
KFW (German Bank)	2000-2007	US$1.8/year (total US$12 million)
Reforesta (sales of bonds)	2002-2004: design phase 2005-onwards bond issues	US$300,000 for design phase and projected fund recovery from bonds at 2.6 billion colones.
CSA (Environmental Services Certificates)	2002-onwards	US$1.35 million/year

Source: Rodríguez, 2005 in (Porras, et al., 2006).

Annex 5: Online Calculation Procedure Clean Trip

Annex 6: Online Calculation Mechanism Living Forest

Annex 7: Participating Organizations Green Your Trip

Year unknown	1. Esquinas Rain Forest Lodge	2. Agencia de Viajes Horizontes	3. Corporación StartSistemas	4. Librería Internacional
	5. C.C.T. (Vehículos)	6. BATCA	7. Consultoría Biofisica A&A	
2007	1. Hotel Flor Blanca	2. Tex Tour	3. Swiss Travel	4. Servicios Turísticos Sabinet
	5. Costa Rica Natural	6. Mar Santacana Sitjá	7. Banco Improsa	8. Costa Developers
	9. Programa Amigable con el Cambio Climático	10. Servicentro Las Avenidas	11. Alterra Partners Costa Rica S.A.	
2008	1. Nature Air	2. Naturalmente Tico Tours	3. Ecoaventura	4. Conselvatur
	5. Corcovado Lodge	6. Silencio Lodge	7. CINDE	8. Sky Treck
	9. Costa Rica Trails	10. Eco Alianza	11. Natura Tropical Home	12. Urbanización La Paz
	13. Norte a Sur Consultores	14. Clima Ideal	15. Credomatic (concierto Editus)	16. Coopeldos
	17. Turismo y Conservación Consultores	18. Universidad Nacional CR	19. Banco de Costa Rica	20. Ericsson
	21. Productos Orgánicos Biobella Ltda	22. Programa Amigable con el Cambio Climático-VII Feria de Turismo Rural Comunitario y Vida Sostenible	23. Gasolinera ASCOM	24. Hospital Clinica Biblica
	25. Agroindustrial Las Mellizas	26. Martha Gamboa Lcda.	27. Librería Internacional	
2009	1. Europcar	2. Hotel Villa Roca	3. Swiss Travel	4. Hotel Aurola Holiday Inn
	5. Hotel Ocotal Beach Resort	6. Veragua	7. Unique Adventures	8. Asociación Costarricense de Operadores de Turismo
	9. Turismo Colón	10. Caminantes Mundo Expeditions	11. Camino Travel	12. Mar y Selva Lodge
	13. II Viaggio Travel	14. Caminante Pico Tours	15. Anywhere Costa Rica	16. Cayuga Sustainable Hospitality
	17. Turismo y Conservación Consultores	18. Ecole Travel	19. Sistema Gestión Empresarial	20. Postales Regala Vida Con Una Postal
	21. Empresas GS1	22. PACC-Stand Ecológico Fiestas en Palmares	23. PACC-Stand en V Feria de Trabajo Bilingüe/CINDE	24. Empresas CINDE
	25. IBP Pensiones	26. ADN Solutions	27. Feria Paz con la Naturaleza	28. Clínica Bíblica
	29. Biobella Organics	30. Aito Llodio	31. Venta de Productos del Programa en Feria Expo Verde	32. Inmobiliaria Bertero
	33. Zona Franca Coyol S.A.	34. Rumidesa	35. Aromas para el Alma	36. Randall Paniagua
	37. Servicentro Las Avenidas	38. Grupo Peddler	39. Clínica Bíblica y Puerto Jiménez	40. Enlace S.A.
	41. Industria Mueblera Durán	42. Programa Estudios Latinoamericanos	43. Grupo Assurant Pinnacle	44. Trisquel SA

Source: Programa de Aliados Cambio Climático, 2009b

Annex 8: Project Locations Green Your Trip

Province	Project Location
Alajuela	1. Bijuagua
	2. El Silencio Lodge
	3. Finca CoopeJubi
	4. Upala
	5. Zona Franca Coyol
Escazú	6. Finca Caslino
	7. Escuela de Guachipelin
San José	8. Finca Solaz del Bosque
	9. Campus UNA
	10. Finca Leonel Zúñiga
	11. Guayabo de Mora UNA
	12. Finca Teresita en Santa María de Dota
Limón	13. Colegio de Siquirres UNA
	14. Finca 28 Millas UNA
	15. Bananito Lodge
	16. Escuela del Trópico Húmedo
	17. Guácimo UNA
Puntarenas	18. Hacienda La Amistad
	19. Finca Zona Sur UNA, Osa Peninsula
	20. Corcovado Lodge, Osa Peninsula
Heredia	21. Finca Tirol UNA
	22. Finca de Servicios Públicos UNA
	23. Finca Julieta Ramírez UNA
	24. Finca San José de la Montaña UNA
	25. Finca Rafael Cortés UNA
	26. Finca de Municipalidad San Rafael de Heredia UNA
	27. Finca Motilonia
	28. Monte de la Cruz UNA
	29. Finca Warumo
	30. Finca La Promesa UNA
Guanacaste	31. Hacienda Pinilla
	32. Finca Pozo Azul
	33. Sistemas Agroforestales Colegio de Guápiles
	34. Argendora-Guanacaste UNA

Source: Programa de Aliados Cambio Climático, 2009c

Annex 9: Intermediaries Green Seat

Five Star Agencies

1. Fair Mundo Travel B.V.
2. Natuurlijk Reizen
3. Sparkz - events, and incentives & group travel

Four Star Agencies

4. Airplus International
5. ATP
6. BCD Travel
7. Cheaptickets
8. Multatuli
9. Raptim Travel
10. VCK Travel

Three Star Agencies

11. Airstop
12. Anders Reizen
13. Avontuur.nu
14. Battuta Reizen
15. De Boer & Wendel B.V.
16. DesertTours
17. Dim Sum Reizen
18. Fairgroundsessions
19. First Choice
20. Fox vakanties B.V.
21. GoBest
22. Hannick Reizen B.V.
23. Jan Doets America Tours
24. Joker
25. Koning Aap
26. Labrys Reizen
27. Musico Reizen
28. Sawadee
29. Scandinavian Wintersports
30. Secrets of the desert
31. Shoestring
32. SNP Natuurreizen BV
33. Stap Reizen
34. Stichting Commundo
35. Sunrise Travel
36. Treasury Travel

Source: (Climate Neutral Group, 2010b)

Annex 10: Participating Organizations Green Seat

1	ABN AMRO Hypotheken Groep B.V.	49	BrouwerBetist
2	ADSE	50	BSA Schaderegeling
3	Aerodate International Surveys	51	Bureau Krijtlijn
4	AgroFair	52	Canon Europe
5	Agromisa	53	Caplare Energy
6	Airplus	54	Chauffeursnet
7	Airstop (Belgie)	55	Cheaptickets
8	AKB Bert Muller (Grootkeukentechniek)	56	ChinaContact
9	AlwaysBeMobile	57	Christen Unie
10	Ameco	58	CityDynamiek Eindhoven
11	Amnesty International	59	Cleanbits
12	AMREF	60	Climate Focus
13	Amsterdam Fashion Institute	61	CMC, Mensen met een missie
14	Antropia	62	CNV
15	Antroposofische Vereniging	63	CO_2mpensatiePolis
16	ANWB	64	ComPlus Training en Advies bv
17	ANWB Test- en Trainingscentrum	65	Concert at Sea
18	A-One	66	Conquaestor
19	Art for Nature	67	Context International Cooperation
20	ARTi Producties B.V.	68	Contour Projects
21	Arval	69	Convention Company
22	Asselbergs Ventilatoren BV	70	Copex Air Cargo
23	ATBC	71	Cordaid
24	ATP, The Advanced Travel Partner	72	Corpore Sano
25	AURO Naturfarben AG	73	Coulisse B.V.
26	Avalon	74	Cox Geelen
27	B.O.D. Events	75	CreAct
28	Batutta	76	CREM
29	BBI	77	Cruise Coordination
30	BBO	78	CSR Academy
31	BCD Travel	79	Daerom Gemeentedetacheringen
32	Belastingdienst	80	Dag Media BV
33	Ben & Jerry's	81	Dance4live International
34	Berenschot Groep B.V.	82	Dark & Light Blind Care
35	Bergler ICT	83	Dayspa
36	Between-us	84	De Goudse Verzekeringen
37	Bible League	85	De Kleine Aarde
38	Binger	86	Dechesne & Boertje
39	Bisnez Management	87	DeMethoeve
40	BK-Gas	88	Department of Environmental Science -Radboud University Nijmegen
41	Blij dat ik Rij	89	Desert Tours
42	Blinq Carwash BV	90	Deudekom B.V.
43	BNN	91	DHV
44	Boek.net	92	DimSum Reien
45	Boekhout	93	Discover & Snow Leopard
46	Bohemen B.V.	94	Discovery Networks Benelux
47	Bomencentrum Nederland	95	DMH Vervoersdienst
48	Bright & Company	96	DOEN Foundation

97	Doen Participaties	144	Global Creations
98	Draaijer+partners	145	GoBest (First Choice)
99	DriveCarSharing	146	Goede Raad
100	Duurzame hosting	147	GoodForAll
101	ECEAT	148	Graffitinetwerk
102	Eco Events	149	Grand Catering B.V.
103	Ecodrukkers	150	GraphicMail
104	ECO-job BV	151	GratisPrint
105	Eco-Point International	152	Green Development Foundation
106	Effect Group	153	Green Event Company
107	Eindhoven Airport	154	GreenCard Visa
108	Ekkelenkamp Websolutions	155	Greenchoice
109	Ekohosting	156	GREENLease
110	Eneco Energie	157	Greenpoint
111	Enigma Business Consulting	158	GreenPoint Koeriersdiensten
112	Environmental Policy Group Wageningen Universiteit	159	Groenendijk bedrijfsschoenen en kleding
113	ENVIU	160	Groenlinks
114	EOS Consult	161	GSP-3GSP
115	Eosta	162	Gulpener bier
116	Equens	163	Hampshire Hotel - Wesseling
117	Erdi	164	Hampshire Inn - Bieze Borger
118	Evoswitch	165	Hannick
119	Extremehorizon Ltd	166	Happinez
120	Fairground Sessions	167	Happy Company
121	Fairmundo	168	High Concept Software Development
122	Familieavontuur	169	Homeless Child
123	Ferney Group	170	Hotel en Congrescentrum de Zeeuwse Stromen
124	Ferry Harms Ski en Bergsportvakanties	171	Hout'crea-tor
125	FleetSelect	172	Human European Consultancy
126	Fles & Mes Catering	173	Humanistisch Overleg Mensenrechten
127	Flex work at home	174	Hybridelease
128	Florius	175	Ideëel+
129	FMO	176	Idiligo
130	Fred Luiten Concertorganisatie	177	Inbo B.V.
131	Free Voice	178	Incentive Partners
132	Fruit	179	ING Car Lease
133	Fysiotherapie de Molengaard	180	ING Group
134	Gasterra	181	Innogoods
135	Gelderse Milieufederatie	182	IntEnt
136	Gemeente Amersfoort	183	Inter Actus Groep BV
137	Gemeente Amsterdam, stadsdeel Noord	184	International Orange
138	Gemeente Boxtel	185	Interserve
139	Gemeente Maassluis	186	Invens
140	Gemeente Putten	187	IUCN National Committee of the Netherlands
141	Gemeente Terneuzen	188	JBM Koeriers
142	Gemeente Utrecht	189	Jobstap
143	Gerritse IJzerwaren	190	Joffi

191	Joker (Belgie)	238	Naturvital
192	Jp Morgan Climate Care	239	Natuurlijkreizen
193	KICI	240	NCDO
194	KMO Consult BV	241	Nelson Mandela Kinderfonds
195	Koffiebranderij Peeze	242	NHTV
196	Koning Aap	243	Nicole van Gans
197	Koninklijke Eduard van Leer B.V.	244	No Borders
198	Kudzu Webshop	245	Noordlease
199	Kuyichi	246	Nutreco Holding N.V.
200	KWA Bedrijfsadviseurs	247	Obvion
201	La Promesse-Groep	248	OneMen
202	Legian	249	Oostendorp Autolease
203	Legrand	250	OVG Projectontwikkeling
204	Live House	251	P&K Rail BV
205	Lobbes.com	252	PAK Weeshuis Project Rantepao
206	Louwman & Parqui (toyota)	253	Parthen Group
207	MacHelp	254	Partners for Innovation
208	MAIN energie	255	Pentascope
209	MAX 120	256	Pepperminds
210	Max Havelaar	257	PGGM
211	MDF-Training en Consultancy B.V.	258	Pino Productions
212	Meer Mens	259	Plan Nederland
213	Memorami	260	PMF
214	Mercedes Benz NL B.V.	261	Poch Ambiental
215	MF Horeca	262	Pré Consultants
216	Milieu Centraal	263	Prepack
217	Milieufederatie Noord-Holland	264	Press Now
218	Ministerie van Algemene Zaken	265	Preventiecentrum Almere
219	Ministerie van Binnenlandse Zaken	266	PricewaterhouseCoopers
220	Ministerie van Buitenlandse Zaken	267	Prodrive Training
221	Ministerie van Financiën	268	Provincie Flevoland
222	Ministerie van Justitie	269	Provincie Friesland
223	Ministerie van Landbouw, Natuur en Voedselkwaliteit	270	Provincie Utrecht
224	Ministerie van Onderwijs, Cultuur en Wetenschappen	271	PSV
225	Ministerie van Sociale Zaken en Werkgelegenheid	272	PvdA
226	Ministerie van Verkeer en Waterstaat	273	Qics
227	Ministerie van VROM	274	Radio 538
228	MotoZoom	275	Raedthuys Groep
229	Movenext	276	Raptim
230	MTV Networks	277	RaymakersvdBruggen
231	Multatuli	278	Redemptoristen
232	MultiLease	279	Regio Noord- en Midden- Limburg
233	Musico Reizen	280	Regioplan Beleidsonderzoek
234	MyShipper	281	Restaurant en Kwekerij de Kas
235	Nationale Autokaart	282	Ricoh
236	Natudis	283	Riesjard Schropp Fotografie
237	Naturaleze y Vida	284	Rietbroek Voor Schoonhouden BV

285 Rondo Afvalbeheer
286 Rotterdam Climate Initiative
287 RSM Erasmus University - Department Management of Technology and Innovation
288 RTL Travel
289 Saan Verhuizingen
290 Sapa Pole Products (Lantaarnpalen)
291 Sawadee Reizen
292 Scandinavian Summersports
293 Scandinavian Wintersports
294 Schiphol Group
295 Secrets of the desert
296 Selfservice Company
297 SenterNovem
298 SER
299 Share People
300 SHCN dierenuitvaart
301 Shoestring
302 Siebert & Wassink
303 Simavi
304 Sita
305 SMK
306 SNP
307 Solidaridad
308 SOMO
309 Sonneborn
310 Sonologic
311 SPARKZ
312 Spin Consult
313 SRE Milieudienst Eindhoven
314 Stap Reizen
315 Stichting de Oude Beuk
316 Stichting Jobstap
317 Stichting Liliane Fonds
318 Stichting Loesje International
319 Stichting Pensioenfonds ABP
320 Stichting Red een Kind
321 Stichting Wilde Ganzen
322 Stimular
323 Stipt Chauffeursdiensten
324 Stratic B.V.
325 Strict
326 Strix Lease Service
327 Sunrise (First Choice)
328 SyncForce
329 Tamoil
330 Taxi & Meer
331 Terberg Leasing
332 The Green Fan (EvoSwitch)
333 Ticken
334 TNT Express Benelux
335 TNT International
336 TNT Post
337 Top Movers locatie Arnhem
338 TopFinancials B.V.
339 Transavia
340 Triodos Assurantien
341 Triodos bank
342 Triodos Facet
343 Triple Jump
344 TwentyKnots
345 Umoja
346 UNHCR
347 UNICEF
348 University for Peace
349 Utz Kapeh
350 UWV
351 Valid Express
352 VAMED Nederland BV
353 Van Gansewinkel Groep BV
354 Van Vliet Contrans
355 VCK Cruises
356 VCK Travel
357 Vereniging van Milieuprofessionals
358 Verkeersveiligheid Groep Nederland
359 Vitam Catering
360 WaardenManagement
361 Warner Strategy and Fundraising
362 WASTE
363 Waterschap Rivierenland
364 Wemos Foundation
365 Wetlands International
366 Wolter & Dros
367 World Forum
368 World Press Photo
369 XE Groep
370 XMARX
371 Yenen Engineering
372 Zending Gereformeerde Gemeenten
373 Zinnebeeld

Source: (Climate Neutral Group, 2010a)

Annex 11: Online Calculation Procedure Green Seat

Annex 12: Operational Partners Trees for Travel

1. 52 manieren
2. Achmea health centre
3. Artis
4. ASN-bank
5. Brighter World (see 52 manieren)
6. Collusie [non-profit]
7. De Balie
8. Enviu
9. ETC [partly non-profit→ETC Foundation]
10. Global Action Plan
11. Goede Doelen Winkel
12. Golfvereniging
13. groen rijden
14. Hivos [NGO]
15. Krant van de Aarde [non-profit]
16. Marwijk Advies
17. OV fiets
18. Pluimen
19. Done right
20. Joho
21. Responsible Young Drivers
22. Stichting Monkey business [non-profit]
23. Sustainable Dance club (see also Trees for Dance)
24. Milieuwinkel
25. Trees for Dance (see Sustainable dance club)
26. Natuurwinkel Nijmegen
27. VNG [non-profit]
28. Zinnige zaken[*]

Source: (Trees for Travel, 2010b)

---

[*] All the organizations without a notification of being non-profit or NGO have a commercial background

Annex 13: Intermediaries Trees for Travel

1. Activity international
2. Artemis Body en Mind reizen
3. Askja reizen
4. Atma Asia travel
5. Ayuka travel
6. Beluga travel
7. Buro Scanbrit
8. Camping Maka
9. Chalinga Travel
10. Da Vaj Travel
11. Direct naar de Zon
12. Drietours Reizen BV
13. Dutch Down Under
14. Eco volunteer
15. Eigenwijze Reizen
16. Flying Pig
17. Global Cyclist
18. Happy Little Camper
19. HT reizen
20. Ijsland specialist
21. Ijsland tours
22. Incentive wise
23. Industrial Inspiration
24. Keycamp
25. Lakota
26. Laoshan Centrum
27. Medventure
28. Mouveout Geotours
29. NRV holiday
30. Pangea travel
31. Peter Langhout Reizen
32. Plus Taalreizen
33. Riksja
34. Sahara Travel
35. Speedwell
36. Terramundo
37. Thika Travel
38. Time to Travel
39. Topo Actief
40. Traveloke
41. Tuna fish
42. Tweevoeter
43. Vakantiekaart
44. VNC travel
45. Voettochten.nl
46. Wild Europe

Source: (Trees for Travel, 2010b)

Annex 14: Participating Organizations Trees for Travel

1. VAS Facility
2. ABC consultant / De Bomen
3. ABN-Amro (1 persoon)
4. Hillebrand Verhuizingen
5. Chapeau
6. AIA software
7. Carrier UTC
8. Alles behalve Vierkant
9. Ambassade Japan
10. Ambassade Tanzania
11. American womensclub
12. Amidst
13. Apenheul
14. MCO
15. Randstand marine Offshore
16. Artz BV
17. Atelier Jan Naezer
18. A&W Ecol Onderzoek
19. Bee
20. Benefit
21. Zeilklipper Gouwzee
22. Bibeck
23. BlomBerg Instituut
24. NLR
25. C2N
26. CAH Dronten
27. Carnbee Consultancy (Chris Geerling)
28. Clifford Chance
29. Colibri Advies BV
30. Componence
31. Coppa
32. Corporate facilitiy Partners
33. Cursum IT
34. D+Z Achitecten + Projectmanagers
35. DAR
36. Decido
37. Deerns
38. De Kleine Aarde
39. DPA Supply Chain
40. DTZ Zadelhoff
41. Easy sport
42. Eco volunteers
43. Elfer Advies
44. Energie bureau, het
45. Energiened
46. The Makers
47. Eyetractive
48. Fair Match
49. Flying Pig
50. Fortis Investment Netherlands NV
    (same person as ABN)
51. GdB
52. Gemeente Utrecht
53. Genie BV
54. Geregeld
55. Go telecom
56. Haven Amsterdam
57. HEC
58. Heische Hoeve
59. Hill an Knowlton
60. Icco
61. Ideeel +
62. IJK advies
63. Stab (Sticht. Adv. Best Recht)
64. International Womens club
65. KCE
66. Kernel Holding
67. kesselskramer
68. KIA
69. KIA Zweden
70. KplusV
71. KVK noord NL
72. Lakran B2B solutions
73. Loef, de
74. Maetis
75. Actie is reactie
76. Algemene Reiscommissie (KNNV)
77. Meelis & Partners BV
78. Bestuursacademie
79. Bureau buiten
80. CAP SD
81. CDJA
82. MVOplossingen
83. Nationale Jeugdraad
84. Nen
85. Crossbillguides
86. Nomad
87. One architecture
88. Outdoor Fotografie
89. P2 managers
90. Plant een Kerk
91. POCN
92. Port of Rotterdam
93. Pot Verhuizers
94. Peter Langhout
95. PS Produkties
96. Eco conseil
97. Pro4mance
98. Pronk Juweel
99. provincie Zuid Holland
100. Qua Associates BV

101. Rho Delta Events BV
102. Rris
103. Gemeente Bloemendaal
104. Gemeente Breda
105. Gemeente Dordrecht
123. Sator
124. SCC
125. SD internet concepten

106. Gemeente Geldrop-Mierlo
107. Gemeente Heerhugowaard
108. Smart Energy Consult
109. SNV
110. Staatsbosbeheer
111. Mercator
112. Stella
113. Stichting VAM
114. Syzygy
115. Taalbureau Berends (Blooming Media)
116. Teijin Twaron
117. Time Foundation
118. Transakt Beheer
119. Triarii
120. Trimension
121. Tuyu
122. Uniekkadoos
126. SevS
127. Six senses
128. Valmont
129. Vandenbrink Milieu
130. Verhalenfabriek
131. Vitamine circus
132. Volkskrant reizen
133. Wave BV
134. Twynstra Gudde
135. Wolterinck BV
136. Villa DM
137. Youbedo
138. Youngbits
139. Zeilklipper Ilsemar
140. Zelino BV
141. Zero-e
142. Zinnith

Source: (Trees for Travel, 2010b)

Annex 15: Online Calculation Procedure Trees for Travel

Stop Global Warming: plant a tree!

Every time we heat our homes, take a flight or drive the car, carbon dioxide is added into the atmosphere. Carbon dioxide is a greenhouse gas that is released when fossil fuels such as oil, gas and coal are burnt. Trees absorb carbon dioxide and turn it into oxygen. You can help create a greener planet and keep the greenhouse effect in check by contributing a modest amount to Trees for Travel to compensate your greenhouse gas emissions.

Annex 16 Comparison Table Costa Rican and Dutch Programs

		Costa Rican Climate Compensation Programs			Dutch Climate Compensation Programs		
		Clean Trip	Living Forest	Green Your Trip	Green Seat	TfT	CO2ZERO
Actors	*Initiator(s)*	Government	Government	Alliance private- (national and international), governmental organizations (national), and NGO's (national and international)	Private	Private and non-profit	Private
	Shareholders	—	—	No information available	Private and non-profit	—	Non-profit (Stichting Administratiekantoor KLM I and II) government
	Strategic/financial Partners	Governmental (national and international), private (national), and public (national and international)	Governmental (national and international), private (national), and public (national and international)	Private (national and international), governmental (national), and NGO's (national and international)	Private non-profit (MVO Nederland and ICROA) National and international	National and international governmental, private, and non-profit	NGO International (WNF)
	Operational Partners	Indirect partners: governmental (national)	Indirect partners: governmental (national)	Governmental (national), private (international), NGO (international)	National private non-profit (Climate Neutral Group)	National and international private, non-profit, NGO	Private (KLM-Air France)
	Project Partners	—	—	Governmental	Private, non-profit, and NGO's National and international	National private, non-profit, NGO	—
	Target audience	Individuals, businesses, organizations	Individual travellers	Individuals (travellers and others), businesses, organizations	Individual travellers and travel agencies as intermediaries	Individuals (travellers and others), businesses, governments, travel agencies as intermediaries	Individual KLM passengers, and companies
		National and international	National and international	National	National	National and international	National and international
	Intermediaries	Budget Rent a Car	Adobe Rent a Car	—	36	46	—
	Individual Participants	No information available	2007: 211 2008: 615 2009: estimated around 615	2007: 16 2008: 53 2009: 19 (2 persons were mentioned twice, these are only included once)	2007: no info 2008: no info 2009: 40.000	2007: ±450 2008: ±1036 2009: ±1136	2007: no info 2008: no info 2009: no info 28.000 seats since initiation in 2007
	Participant Organizations	Since initiation 49, of which 15 tourism related	—	2007: 12, of which 5 tourism related 2008: 27, of which 11 tourism related 2009: 41, of which 18 tourism related	2007: no info 2008: no info 2009: no info Currently 373	2007: ±120 2008: ±120 2009: 142	2007: no info 2008: no info 2009: no info Currently 15
	Mutual Relation	Directly related to Clean Trip; in close future related to Climate Conscious Travel; competition Green Your Trip	Directly related to Living Forest; competition Green Your Trip	Competition Living Forest and Clean Trip. Heavily criticizes competition for using non-native tree species	Competition Trees for Travel and CO2ZERO	Competition Green Seat and CO2ZERO	Competition Green Seat and Trees for Travel

Resources	Sources of Finance	National: Eco/fuel-tax, selling CSA's through Living Forest	National: Eco/fuel-tax, selling CSA's through Living Forest	National: selling eco-stickers, green postcards, compensation donations	National: self generated through compensation, consultancy, IT systems and CO2 calculations	National: 3 subsidies in past, self generated through compensation, donations Trees for All	National: self generated through core business activities as airline, compensation
		International: Bio-Carbon Fund from World Bank (US$ 2.207 million), GEF, Conservation International, and Equator. Selling CSA's through Clean Trip, and Agua Vital. Selling Carbon Credits	International: Bio-Carbon Fund from World Bank (US$ 2.207 million), GEF, Conservation International, and Equator. Selling CSA's through Clean Trip, and Agua Vital. Selling Carbon Credits	International: Ashoka	International: —	International: —	International: —
	Division Finance %	100% goes to local farmers	100% goes to local farmers	No data available	60% goes to projects 40% goes to awareness creation, improvement technical- and calculation systems	At least 75% with the aim for an average of 80%.	100%, KLM covers all overhead costs
	Project Types	Forestry through environmental services	Forestry through environmental services	Reforestation with native tree species. Aim to include recycling, sustainable agriculture, and alternative energy sources by 2012	Forestry and renewable energy → 43% biomass projects, 15% wind energy projects, 39% forestry projects, and 3% water energy projects	Forestry, preservation and renewable/sustainable energy	Renewable energy
	Project Locations	National: sequestration projects divided over 4 provinces	National: sequestration projects divided over 4 provinces	National: divided over 7 provinces	National: —	National: —	National: —
		International: —	International: —	International: divided over 7 Latin-American countries	International: divided over 3 continents	International: divided over 3 continents	International: based on flawless regime, KLM destination, connection with existing CSR initiatives
	Knowledge Distribution	Towards target audience: website, free publicity in media	Towards target audience: website (Spanish), free publicity in media	Towards target audience: website, free publicity in media, informative presentations schools and companies	Towards target group: website, free publicity in media, flyers via intermediaries, and presentations	Towards target group: website, intermediaries, and free publicity in media	Towards target group: website, billboards, in-flight magazine, brochure, stakeholder consultancy meetings and presentations
		Towards support receivers: general governmental actions, no further info available	Towards support receivers: general governmental actions, no further info available	Towards support receivers: no info available. Many of the receivers are also partner or donator	Towards support receivers: training and educational presentations	Towards support receivers: local participation	Towards support receivers: handled by Gold Standard
	Distribution Decisional Power	Large actor coalitions can influence decisions	Large actor coalitions can influence decisions	Actors can influence decisions	Divided among: share-holders → general issues; director → specific issues like vision and mission; marketing employees → external communication	Multi-disciplinary board of directors with 6 members has final say, responsibility, and accountability.	Managing director KLM→ Director Corporate Social Responsibility & Environmental Strategy

Rules of the Game							
	Application Participants	Contact FONAFIFO → amount carbon compensated? → calculation FONAFIFO → pay compensation	Go to website → fill out location of origin and destination, and nr of passengers → calculation FONAFIFO → pay compensation	Individuals: Vehicle owners: buy Eco-Car sticker→ average carbon usage compensated with 11 trees	Individuals: Directly: go to website → fill out location of origin and destination; one-way or round trip; nr of passengers; CO2 or all emissions → calculation Green Seat → pay compensation	Individuals: 3 ways via website 1. Flight emissions: compensation for air travel 2. Climate Calculator: compensation per generator 3. Direct donation	Individuals: compensation is offered in the booking procedure
				Tourists: Contact PACC→ donate $10 for 2 week trip → 1 tree planted	Via intermediaries: 5-star: book trip → compensation is paid; 4-star + 3-star: book trip → select compensation option → pay compensation		
				Organizations: contact PACC → amount carbon calculated → nr trees calculated → costs calculated → pay compensation	Organizations: not applicable	Organizations: contact TfT →chose to plant with or without certification → provide overview usage →calculation TfT → contract signed → pay compensation	Organizations: compensation per year or half a year → contact KLM → calculate emissions
						Travel agencies: place link TfT on website → TfT places link to agency; distribution promo material → place agency stamp on answering coupon; Info in brochure; integrate TfT in booking procedure (10% provision for agency); sell compensation vouchers to clients	
	Application Support Receivers	Contact FONAFIFO → submit forest management plan → plan approved FONAFIFO → adopt plan → receive payment → FONAFIFO monitors yearly, when approved → next annual payment	Contact FONAFIFO → submit forest management plan → plan approved FONAFIFO → adopt plan → receive payment → FONAFIFO monitors yearly, when approved → next annual payment	Contact PACC → sign contract	Contact Green Seat → carbon feasibility assessment → contracting carbon credits → development financial models and business plans → project preparation → verification and registration → post registration	Contact TfT or TfT contacts project → criteria for participation sent → when criteria met amounts sequestration calculated → costs calculated → financial support defined	Gold Standard project 'broker' contacts KLM → KLM chooses project

Rules of the Game	*Contracts*	Donator: Min 5 years + 1 hectare	Donator: No contracts	Organization donator: 1 year contract Individual donator: no contracts	Donator: 2-3 years	Donator: average 3 years	No contracts
		Receiver: Forest conservation → 5 years; Reforestation → 15 years; 50% in first year, 20% in second, 10% in following 3 years; Sustainable forest management → same as reforestation	Receiver: Forest conservation → 5 years; Reforestation → 15 years; 50% in first year, 20% in second, 10% in following 3 years; Sustainable forest management → same as reforestation	Receiver: 3 years for planting and maintenance.	Receiver: 4-5 years	Receiver: between 25-30 years → 2 phases: construction phase (around 3 years) and phase for maintenance and compensation local livelihood losses	Gold Standard contracts
	Calculation Mechanism	Based on IPCC	Based on IPCC	Based on IPCC	Based on UNEP Greenhouse Gas Protocol	Tested and acknowledged by RIVM (National Institute for Public Health and the Environment)	Based on IPCC
	Generators Compensated	Travel by car, boat, domestic air travel, all other tourism activities	International flights from and to Costa Rica	Travel by car, boat, and sea; agricultural and livestock activities; business and industrial activities; energy consumption	Air travel (Climate Neutral Group all other generators)	All types of transportation modes; electricity use; other fossil fuel usage	Air travel
	Quality Control	National: Agronomic center of Tropical Agricultural reserach and education (CATIE), the National Forestry Board of Farmers (JUNAFORCA) and internal and external audits such as the General Controller of the Republic.	National: Agronomic center of Tropical Agricultural reserach and education (CATIE), the National Forestry Board of Farmers (JUNAFORCA) and internal and external audits such as the General Controller of the Republic.	National: University of Costa Rica; Corcovado Foundation	National: BDO CampsObers Audit & Assurance	National: Klimaatcompensatie.nl; Applying for Netherlands Central Fundraising Bureau (CBF) Charity Hallmark.	National: KPMG Sustainability; WNF (World Wildlife Fund Netherlands)
		International: For sequestration projects CDM Standards	International: For sequestration projects CDM Standards	International: Control Union Certifications; Ashoka	International: ICROA; Gold Standard; VCS; CDM Standard; Climate Community and Biodiversity Standards. Verification through UNFCCC chosen organizations.	International: Kyoto; Forest Stewardship Council (FSC)	International: WWF (through WNF)→ Gold Standard; ISO 14001 certification

Rules of the Game	Laws /conventions	National: Forest Law 7575; 7174; Executive Order No.19886-MIRENEM; National Development Plan; National Forestry Development Plan; National Peace with Nature Plan	National: Forest Law 7575; 7174; Executive Order No.19886-MIRENEM; Nat. Dev. Plan; Nat. Forestry Dev. Plan; National Peace with Nature Plan	National: National Strategy for Climate Change	National: no information available	National: no information available	National: no information available
		International: Kyoto Protocol → CTO's and CER's (CDM); Millennium Development Goals	International: Kyoto Protocol → CTO's and CER's (CDM); Millennium Development Goals	International: no information available	International: Kyoto Protocol	International: Kyoto Protocol and Millennium Goals	International: Kyoto Protocol, IATA goals to fly CO_2 neutral in 2050
	Tax deductible	Yes, for Costa Ricans	Yes, for Costa Ricans	No	No	Yes, for Dutch citizens	No
	Payment systems	VISA and MasterCard	VISA and MasterCard	No information available	iDEAL, VISA, MasterCard, traditional transfer	iDeal, PayPal (including VISA, MasterCard, and American Express), traditional transfer	No information available
	Costs / ton emissions	€3.65	€3.65	€7.31	€11.90	€9,-	€5.95
Discourses		carbon-neutrality discourse	carbon-neutrality discourse	carbon neutrality discourse	climate neutrality discourse	climate neutrality discourse	carbon-neutrality discourse
		forests for climate compensation discourse	forests for climate compensation discourse	forests for climate compensation discourse	certification and standards for credibility discourse	forests for climate compensation discourse	certification and standards for credibility discourse
		sustainable development discourse	sustainable development discourse	energy projects for climate compensation discourse	energy projects for climate compensation discourse	energy projects for compensation discourse	energy projects for compensation discourse
		certification and standards for credibility discourse	certification and standards for credibility discourse	sustainable development discourse	sustainable development discourse	sustainable development discourse	sustainable development discourse
				certification and standards for credibility discourse		certification and standards for credibility discourse	
Effectiveness	Emissions compensated	CO_2	CO_2	CO_2	CO_2-equivalents	CO_2-equivalents	CO_2
	Yearly average compensated emissions	No information available	2.165 tons in first year (2007/2008)	20.747 tons/year	No information available	49.000 tons/year	No information available