

IVM Institute for Environmental Studies

Theory and practice of user fee implementation for nature conservation in the Caribbean, an analysis of success factors and critical obstacles.

Master Thesis Research

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Abstract

User fee systems are effectively utilised in different places throughout the Caribbean and provide sustainable financial resources that successfully enable and support conservation efforts. The main advantage of this market mechanism is that it alleviates the reliance on philanthropic and political trends that are out of reach from PA managers and subject to unpredictable but significant fluctuations. However, in several cases, user fee implementation proves to be infeasible, impracticable or otherwise too challenging. In previous research, financial flows and mechanisms were structured and hypothesised in the 'Eco²Fin' framework, theoretically closing a sustainable finance loop for nature conservation. But due to a lack of empirical evidence, the contextual factors that influence the functioning of sustainable finance mechanisms remain under-emphasised in academic literature. Effective utilisation of the theoretical sustainable finance mechanisms is still faced by numerous obstacles in reality. This research, with the specific -focus on user fee systems, thoroughly investigates the implementation process from firsthand knowledge and experiences. By interviewing eleven key stakeholders from ten different island states in the Caribbean, the results provide additional depth, nuance and complexity to the current base of knowledge on user fee implementation. Concluding, the most challenging obstacles that limit or constrain user fee implementation are social and political resistance, especially the combination of both, whereas the most significant drivers of user fee implementation lie in the governance and communicative domain.

Keywords: Protected Area management, Eco²Fin framework, Sustainable Finance Mechanisms, User Fees.

Abbreviations

GEF: Global Environmental Facility
MPA: Marine protected area
NGO: Non-governmental organisation
PA: Protected area
SFM: Sustainable finance mechanism
SIDS: Small island developing states
TEV: Total economic valuation
WTP: Willingness to pay

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1. Introduction

The accelerated loss of natural capital over the last decades has raised political objectives for the implementation of counteractions to re-establish a healthy balance between human impact and environmental resources (Turner & Daily, 2008). Besides national, international and global action and reporting, such as the Convention on Biological Diversity (CBD) and the Millennium Ecosystem Assessment (MEA), also local conservation partnerships have become more broadly established (McNeely, 1995; Wiersum *et al.*, 2005). In the eyes of many conservationists however, the aforementioned institutionalised partnerships still fall short in stabilizing a sustainable balance between global human impact, resource demand, and the carrying capacity of the earth (Rockström, 2009). Stated by McNeely (1995), future action shall be crucially supported by cooperation between conservationists and institutions and there is a general call for new, innovative ways to enable this.

Direct market-based mechanisms, such as user fee systems, are being proposed to complement existing traditional conservation efforts (Bardsley, 2003; OECD, 2004; Simpson, 2004; Kroeger & Casey 2007; Nijkamp *et al.*, 2008; Hein & van der Meer, 2012). The move from traditional finance towards more market-based mechanisms is being proposed as a means to close the so-called ‘funding gap’ (Geoghagan, 1994; UNEP, 2000). What lacks in the traditional financing approach is the principle that the direct beneficiaries pay the costs of maintaining the given benefits. Integrating this user pays principle is a promising way to generate sustainable financial resources and can be an effective means to secure conservation in an ever more demanding era.

This research focuses on user fee systems, i.e. a concept of levying charges, on those who benefit from a certain protected area, in order to close the funding gap and thereby support conservation organisations. Thereby, the theoretical framework called ‘Eco²Fin’, which will be elaborated in section 3, is used to systematically analyse bottlenecks and solutions encountered in user fee implementation.

The objectives of this research are (1) to apply the Eco²Fin framework in the wider Caribbean region, by interviewing key stakeholders from different islands; (2) to present a synthesis of lessons learned from successful implementation of user fees on small island developing states in the Caribbean region and from examples that have not been successful; (3) to validate the Eco²Fin framework and identify limitations and developments of the framework as a result of its practical application.

To reach the objectives, the following research question is identified: What are the drivers and obstacles that enable or limit the success of user fee implementation and what is their significance?

The following sub-questions are addressed in order to answer the overarching main research question:

- Which lessons from successful and failed implementation of user fees can be drawn for future cases of user fee implementation in the Caribbean?
- Which obstacles, as envisioned in the Eco²Fin framework, could be overcome and which ones prove to be the most persistent?
- Which drivers, as envisioned in the Eco²Fin framework, stimulate the implementation process and what is their significance?

In chronological order, this paper firstly addresses the background of this research in section 2. Secondly, the theoretical framework and methodology in section 3 emphasises the academic relevance and significance, it includes a conceptual framework and a description of the methodology. Thirdly, in section 4 the results from literature research and from the different case studies are outlined and analysed. The discussion in section 5 reflects on the research outcomes and gives an interpretation of the results. Conclusions are drawn in section 6 and lastly, in Annex I to XII the complete interview results per case are given in more detail.

2. Background

2.1 Protected area management

Currently, protected area (PA) management is the frontier and a prominent form of nature conservation, capable of securing biodiversity and providing a wide range of additional ecological benefits (Maffi & Woodley, 2012). Effective use of PAs can secure long-term conservation of biodiversity, and a variety of ecosystem services. The term ecosystem services is widely used in literature and defined as: The benefits that humans derive from ecosystems (Millennium Ecosystem Assessment, 2005). By hosting these forms of natural capital and ecosystem services, PAs are stated as key assets in national development (Bovarnick *et al.*, 2010). However, protected areas do come at a cost and even small marine protected areas with few staff capacity already require budgets of several USD 100,000 per year (Salm *et al.*, 2000). There is wide recognition that protected area management cannot be effective without appropriate and sufficient support from a range of finance mechanisms, but still the implementation of effective mechanisms is lagging behind (Geoghagan, 1994; UNEP, 2000).

2.2 Sustainable financing

Financial sustainability of protected areas is defined by the Convention on Biological Diversity (CBD, 2017) as follows: “*The ability to maintain stable and sufficient long-term financial resources, allocated in a timely manner and appropriate form, to cover the full costs of protected areas (direct and indirect) securing effectively and efficiently managed PAs.*” While financial sustainability is needed as an underlying condition for effective management of protected areas and natural resource, the support from a range of finance mechanisms is necessary (Geoghagan, 1994; UNEP, 2000). These mechanisms, when effectively utilised, enable better and more long-term planning. Diversity of funding sources is desirable as it buffers income fluctuations from individual sources. However, maintaining a high variety of sources is often paired with high transaction costs, which negatively affect efficient utilisation of these sources (Wunder, 2007). Both stability and diversity of finance sources are favourable as they enable a predictable cash flow and reduce financial uncertainty and insecurity.

The more traditional finance mechanisms that support protected areas in the Caribbean include: “*government subvention, international assistance, individual donations, commercial and bilateral debt swaps and trust funds*” (Geoghagan, 1994; UNEP, 2000; Green & Donnelly, 2003). However, these traditional funding sources are in most cases not sufficient to meet full operating costs of management (Credite Suisse *et al.*, 2014). Additional funding is needed to meet the essential prerequisites in order for conservation activities to become more extensive and potentially develop into environmental management organisations, equipped with research and educative facilities. Spergel and Moye (2004), show that traditional funding streams have evolved accordingly, into more comprehensive and innovative finance mechanisms. These include amongst others entry fees for national parks, user fees for protected areas, environmental taxes and in some cases even environmental legislation was established or extended to allow enforcement of measures and the fining of offenders (Spergel and Moye, 2004).

2.3 User fee systems

It is widely recognised that a user fee system can be a useful finance mechanism for the management of social and environmental impacts in PAs (Schwartz *et al.*, 2012; Thur, 2010; Wang & Jia, 2012; Watson & Borrie, 2003). The main advantage of this market mechanism is that it alleviates the reliance on philanthropic and political trends that are out of reach from PA managers and subject to unpredictable but significant fluctuations (Heinen & Kattel, 1992). It can furthermore contribute to the economic development of local communities and function as a reliable finance mechanism for nature conservation (Drumm & More, 2005).

But in spite of the fact that user fee systems have the potential to generate revenue from different finance streams, there can be political and commercial resistance to its introduction (Buckley, 2003; Green & Donnelly, 2003; Phillip & MacMillan, 2006). With regards to marine park user fees, commercial businesses in the diving industry as well as politicians argue that such a fee will lead to lower visitation rates and they fear economic disadvantages as a result of that (More & Stevens, 2000; Park *et al.*, 2007). Moreover, some people perceive user fees as restrictions on the use of resources that have always been freely accessible and are therefore against the implementation of user fees on principle grounds (Buckley, 2003).

2.4 Willingness to pay studies

Nevertheless, PA managers still have reasons to stay optimistic about user fee systems as surveys on Curacao, Jamaica (Spash, 2000) and Bonaire (Dixon *et al.*, 2000) indicate that the average willingness to pay for user fees among tourists ranges from USD 25 to USD 30 per person per year. Hence, there are solid grounds for conservation organisations to argue for the implementation of user fees. Willingness to pay (WTP) studies are often indicated to be a starting point to provide solid grounds and evidence for the evaluation of implementation potential and carrying capacity that can be expected regarding a user fee system. In the case of a relatively high WTP e.g. > USD 10 per year, this will be in favour of user fee implementation. On the other hand, when WTP values are elicited low e.g. around USD 1 per year such as in a case study in the Philippines (Ahmed *et al.*, 2007), this implies that preservation of natural ecosystems does not have a high priority and the potential for implementation can be considered low.

Ahmed *et al.* (2007) explicitly highlight the roles for advocacy, education and awareness campaigns as means to enhance the WTP values for the management of natural resources. They state that: *“Although the current capacity to raise revenues by charging visitors user fees, especially among domestic tourists, to finance conservation efforts of the Bolinao coral reefs may be limited, economic valuation provides the necessary initial step in putting a price to coral reefs. By giving value to these important but endangered resources means that coral reefs can no longer be treated as free goods that are subject to abuse.”* (Ahmed *et al.*, 2007).

2.5 Contextual factors

It is evident that the implementation effectiveness of PA user fees as sustainable finance mechanisms differs significantly between various islands in the Caribbean region. For some PAs, user fees are reportedly successful, whereas in other places user fee implementation is unsuccessful or deemed infeasible (Depondt & Green, 2006). The outcome of sustainable finance strategies depends on contextual factors and a lack of consideration of these context specific conditions is likely to limit the effectiveness of SFMs in practice (WWF & Credit Suisse, 2014).

On the one hand, there is clearly a limited extent to which it is possible to analyse all contextual factors. On the other hand, categorisation of contextual factors and associated obstacles, still lacking in most research, is the next step towards more systematic analyses of sustainable finance mechanisms (WWF & Credit Suisse, 2014). The previous case study on Bonaire used the categorical division into political, social, environmental, legal, administrative and financial obstacles, based on suggestions by Lujan Gallegos (2015), Spergel & Moye (2004) and UNDP (2014). This research builds upon the same categorisation with the addition of communicative and governance obstacles, which is substantiated in the discussion section.

The outcomes of individual strategies and their patterns of interaction are examined in an intuitive manner. Feeny (1994) refers to this as ‘backsolving’ i.e. analysing the underlying characteristics from the outcome. In Ostrom’s well acknowledged research within the domain of common pool resources, several examples of this type of analysis are provided (Ostrom, 1990). Outcomes of a backsolving procedure can comprise perceived links between contextual factors and success or failure of different finance mechanisms. At least, the outcomes of revealing and structuring the relevant contextual factors should give researchers and practitioners an overview of those factors within and those factors out of reach from decision-making bodies. By specifically focusing on the funds-flow analysis of the Eco²Fin framework, this research has the potential to synthesise lessons from examples and support and inform decision-makers to continue or discontinue with implementation efforts. Furthermore, essential interventions that proved successful in overcoming barriers and obstacles are summarised to provide practitioners with new innovative ideas they may not have thought of themselves.

3. Theoretical framework and methodology

The conceptual framework used in this research, was applied in a case study on Bonaire as a first step towards developing a sustainable finance strategy to close the funding gap for its marine protected area (Sewell in press., 2015). It has delivered feasible SFMs within the specific context of Bonaire. As stated by the author, the case study is used to perceive an example of the current best practices, but the extent to which the key lessons can be applied elsewhere are limited, while Bonaire is unique in its context (Sewell in press., 2015). The Eco²Fin framework enables a structured approach towards mapping and evaluating SFMs.

3.1 Conceptual framework

The framework shown in figure 1 and 2 schematically shows how the sustainable finance loop and funds flow analysis work conceptually. The main aim of this research is to identify drivers and obstacles reflect on their significance and therefore the focus will be on the ‘Funds Flow Analysis’ i.e. the second phase of the framework. To clarify the figure, each step is described in the next section as derived from Sewell (in press., 2015), adapted from Lujan Gallegos (2015) and adjusted to the specific characteristics of this research.

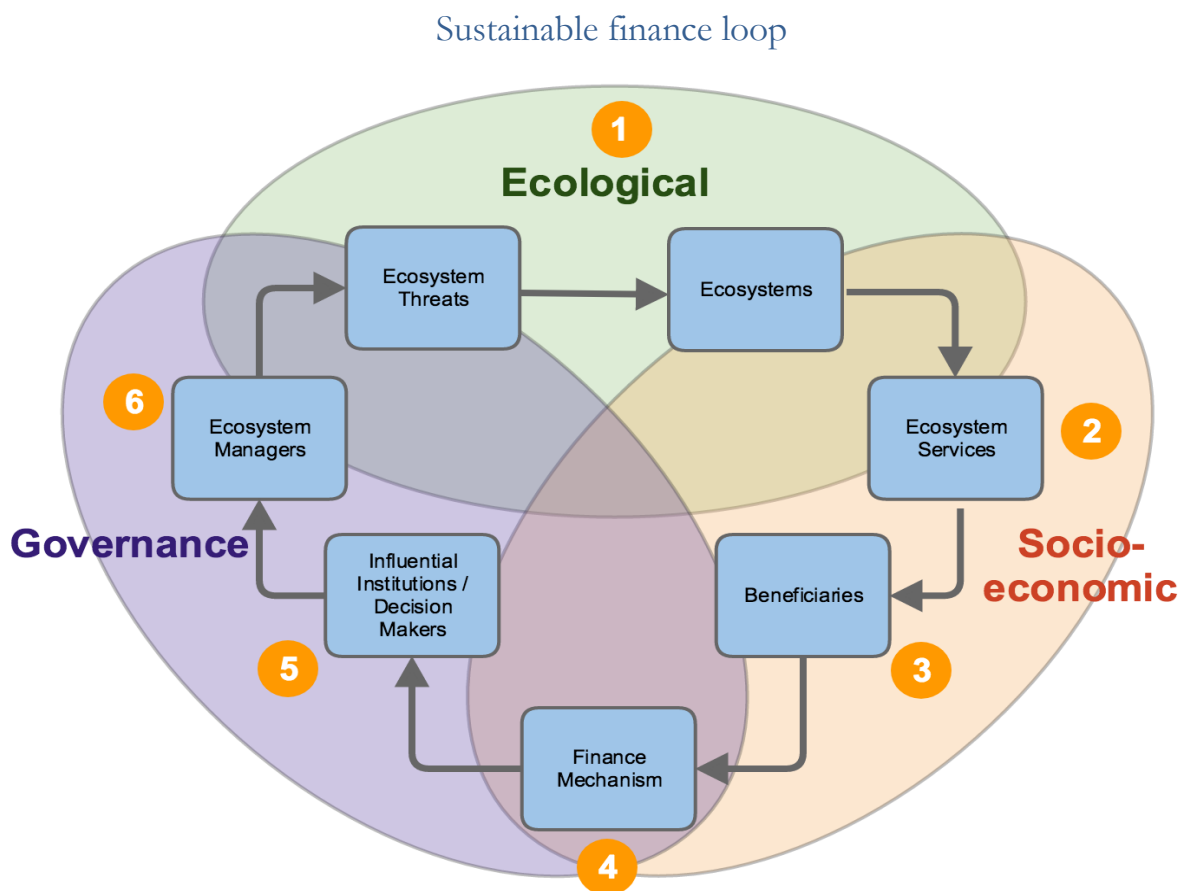


Figure 1: Conceptual framework, phase 1: Contextual scoping, adapted from the Eco²Fin framework Lujan Gallegos (2015).

1. Protected Area (PA) ecosystems and threats

Identify ecosystems relevant to the local conservation, specifically for the implementation of user fees, and the threats to that ecosystem.

2. Ecosystem services

Identify key ecosystem services being defined as the benefits that humans derive from ecosystems (Millennium Ecosystem Assessment, 2005). Relevant ecosystem services for the Caribbean islands are, among others, food provisioning from harvesting fish and coastal protection by mangroves and coral reefs that reduce wave impact.

3. Beneficiaries

Identify key stakeholders that are affected by or benefit from the previously identified ecosystem services.

4. Finance streams

Create an inventory of the current and potential finance streams that can flow from the beneficiaries to the protected area and conservation managers, in this case specifically focusing on user fees as financial mechanism.

5. Influential people/ decision-makers

Identify the key decision-makers who decide on or influence the allocation and amount of funding for nature conservation and protected area management. Do they influence rules and regulation and do they allow or limit the conservation and protected area managers to generate their own funds.

6. Protected area and conservation managers

Identify the actors responsible for the daily operations, monitoring and management of conservation and protected areas. These actors eventually decide on the utilisation of available funding to address threats and implement appropriate conservation measures.

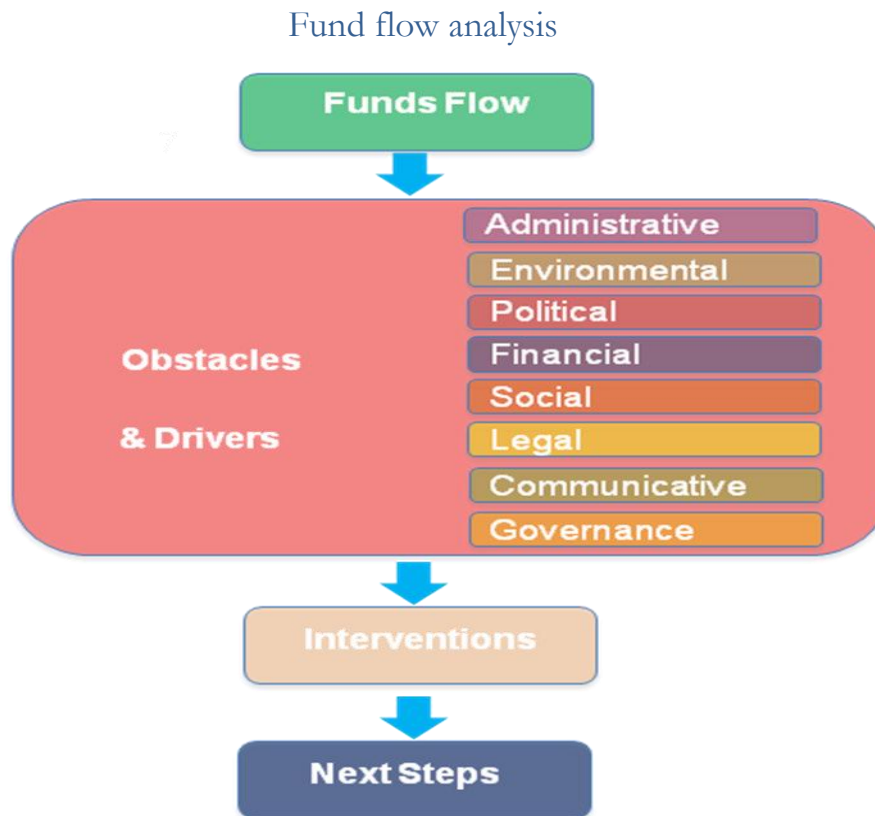


Figure 2: Conceptual framework, phase 2: Funds flow analysis, adapted from the Eco²Fin framework Lujan Gallegos (2015).

Flow of funds

Identify successful sustainable finance mechanisms and the types of financial flows utilised in the Caribbean region. Interviews with key stakeholders from different islands shall give a broad overview of the functioning of these flows and mechanisms within different contexts.

Obstacles and drivers

Using the case study examples derived from the interviews, identify practical obstacles that prevent the conceptual financial flows and mechanisms from being realised or obstacles that lead to inappropriate allocation or limit effectiveness. Characterise the obstacles within one of the 6 categories being: Administrative, environmental, political, financial, social and legal.

Solutions

Draw upon lessons from successful cases and investigate the opportunities to overcome obstacles in other cases. Analyse the context specific conditions, try to adjust existing mechanisms to increase effectiveness and investigate potential for mechanisms that are not being utilised yet. Prioritise these opportunities.

Next steps

Try to identify success criteria and conditions under which implementation of mechanisms and flows are transferrable within a certain context. Indicate which mechanisms function well within which contexts and characterise these in a clear and measurable way.

3.2 Description of obstacles

The original framework has six categories of obstacles – administrative, environmental, political, financial, social, and legal. During this research, two additional categories, being communicative and governance, appeared to be necessary to grasp the full array of obstacles mentioned by the interviewees. The following two paragraphs are co-written by Noah Baars, Lara Hotyat and Olivier Kramer, in a joint effort proposing two adaptations to the Eco²Fin framework in accordance with general findings from interviews within separate studies.

Although of significant importance, problems that arise from mismanagement, traditional group conflicts, personal conflicts between stakeholders and other external factors that influence the decision making process do not fit within the existing categories. Hence they cannot be identified in the framework while in its current form. Governance as an obstacle relates to the processes of interaction and decision-making among the actors involved in the PA management that lead to the creation, reinforcement, or reproduction of social norms and institutions. However, acceptance of certain management decisions is believed to be influenced strongly by the governance structure including e.g. the transparency in governance decision-making. Therefore, governance is linked to implementation success.

Communication is an essential element of the implementation of financial mechanisms such as user fees. A lack of communication can lead to unawareness or a lack of awareness on local, national or international level resulting in persistent conflicts and management ineffectiveness as confirmed by Leverington *et al.* (2010). Table 1 below describes the different categories of obstacles and drivers.

Table 1: Description of original obstacle categories - administrative, environmental, political, financial, social, and legal - adapted from Lujan Gallegos et al. (2005) and IVM & Wolfs (2017); and the new obstacle categories – Communication and Governance - developed by Noah Baars, Lara Hotyat and Olivier Kramer (2017).

Categories of obstacles and drivers	Descriptions
Administrative	The difficulty and costs of enforcement and implementation of financing mechanisms can pose administrative barriers. These involve the complexity to coordinate and monitor the implementation of the mechanism that can lead to high transaction costs. In addition, the capacity to develop financing proposals is categorised as an administrative barrier. The complexity can be influenced by the organizational structure.
Environmental	The environment can constitute a barrier – or an opportunity – to financing mechanisms. It can be related to spatial, geographical characteristics – e.g. isolation from cities – , climate change and biodiversity including species richness, abundance and uniqueness. The use of certain financing mechanisms can lead to negative outcomes, such as an increased impact of tourism.
Political	The degree, reliability and stability of the government’s support – governmental willingness – and public trust in state governed systems. Issues around corruption that may occur are also categorised as political obstacles. International willingness and support can also fall within that category.

Financial	Lack of financial capacity can be a barrier to implement or sustain a mechanism. This can be exacerbated by economic fluxes.
Social	Social impacts of ecosystem conservation can lead to social barriers if there is unwillingness or inability to cooperate. Activities should be equitable and legitimate to reduce social barriers. Poverty and educational levels are also both included in this category.
Legal	Mechanisms must comply with national laws and regulations, in some cases new laws must be passed, which can be time-consuming and costly. National laws must not be conflicting and property and ownership rights must not be an issue for the financing mechanism. Furthermore, laws should include enforcement measures that can be taken to act upon violators.
Communication	Lack of communication at the local level between park management, local communities, tourists and other user groups can lead to awareness problems. When several stakeholders are not being reached through a lack of communication, communication can pose governance obstacles.
Governance	Relates to the processes of interaction and decision-making among the actors involved in the PA management that lead to the creation, reinforcement, or reproduction of social norms and institutions. Acceptance of certain management decisions is believed to be influenced strongly by the governance structure e.g. top-down versus bottom-up implementation. Hence governance is linked to the implementation success.

3.3 Stakeholder analysis

The underlying principle of conducting a stakeholder analysis is the ontological belief in that people's knowledge, experiences and views are meaningful properties of social reality (Bellamy, 2011). Explanations and arguments in dialogue provide depth, complexity and nuance that is unavailable from solely theoretical perspectives (Bellamy, 2011). Primary experiences of the key stakeholders that may utilise sustainable finance mechanisms are valuable elements towards envisioning relevant conditions and incorporating practical issues within the theory. Moreover, structural differences throughout the region, requiring different implementation strategies can potentially be identified, indicating possible context specific links with the functioning of SFMs.

To clarify the term 'stakeholder' the following range of three definitions emphasises the concept in the way it is used throughout this research: "*Someone who affects and is affected by a decision or action*" (Freeman, 1984); "*Whoever owns a problem*" (Checkland, 1981) and "*Any naturally occurring entity that is affected by a decision or action*" (Starik, 1995).

The stakeholder analysis is conducted with a sample group consisting of a strategically determined set of people who make it possible to generalise the results was identified at the start of the research. Special emphasis went to the selection of a sample of stakeholders who are legitimate and representative for their group. Thereby the sample allows to make comparisons, test and develop the theory that is being investigated. The size of the sample is an important characteristic of the legitimacy of the stakeholder group. Once reaching the 'theory-saturation point', it is possible to explain the subject with all the derived information. While receiving a lot of information from one respondent

already, only a small sample group is needed to reach the theory-saturation point (Francis *et al.*, 2010). The process of setting up the sample group also has a dynamic component; through the use of the so-called snowballing-effect (Byrne, 2001). At the end of the dialogue the interviewee is asked who else could be approached for an interview. In this way, key stakeholders, able to provide essential information on circumstances and essential conditions that influence implementation success of user fees, could be reached. With the characteristics of qualitative interviews and the diversity within the sample group in mind, conducting semi-structured interviews is recognised as a suitable and appropriate methodology.

3.4 Research area

The particular focus within the domain of SFMs for nature conservation is on Small Island Developing States (SIDS) in the Caribbean (see figure 3). An initial case study on sustainable finance mechanisms, including the user fee, has been done on Bonaire and provides a reference to the potential utilisation of this mechanism in the Caribbean. This research provides additional depth, nuance and complexity by interviewing key stakeholders from the island states: Antigua, Bonaire, Cayman Islands, Jamaica, Roatan, Saba, Saint Martin, Sint Maarten, British Virgin Islands and Trinidad & Tobago.



Figure 3: Map showing the geographical location of Small Island Developing States in the Caribbean (GraphicMaps, 2017).

3.5 Interview procedure

To collect information on relevant obstacles and drivers, the interviews were conducted in a semi-structured way. This enabled to steer each dialogue in a direction that provided useful input but also allowed flexibility for each of the interviewees that gave a more detailed explanation of their specific case. As a result of this approach, the interview content varied and each conversation took slightly different directions. The sample group was mostly built up by the snowballing procedure by requesting each interviewee for one or more contacts from their network. This led to interviews encompassing different, original views and perspectives from people with different backgrounds. The results reflect one interviewee per island and for Trinidad & Tobago, two interviews were included.

Given the scope of the research, the interviews were conducted through Skype, being the most cost-efficient way.

After the interviews were carried out and transcribed, key messages were written out and organised to enable a structured analysis of obstacles and barriers through the backsolving procedure as explained in the theoretical framework. To handle the interviews confidentially, the key messages were shared with the concerned interviewee prior to report finalisation and publication in order to check for approval. The transcribed and noted key messages are used to envision any success factors and finally for thorough reconsideration of conclusions. The discussion and reconsideration is referred to as triangulation and is an iterative process to fine tune and test the lessons learned and furthermore to enhance credibility of results and conclusion. The triangulation was done with co-researchers, being Noah Baars, Lara Hotyat, Hanna Dijkstra, Liselotte Hagedoorn and Dr. Pieter van Beukering; and through the comparison with other research in peer-reviewed papers.

4. Results

The results section is split up in a review of literature based findings and a synthesis of insights and examples from interviews with stakeholders. The examples from literature include both cases from within a Caribbean context and cases from elsewhere. The cases outside the Caribbean have all been conducted on small island developing states and are in that way comparable to the scope of this study. These examples indicate which obstacles are present, which ones occur most frequently, what means can be used to overcome these obstacles and in which cases the obstacles have stopped or precluded further implementation of user fees. The different interview cases are elaborated in further detail in the Annexes I to XII.

4.1 Literature based results

Willingness to pay studies

Conducting willingness to pay studies proves to be useful both as an analytical tool to estimate implementation potential, to get a more concrete feeling for the expected supporting capacity, and it can be used as a strategic instrument to inform policy makers. Considering the political and social resistance due to perceived economic losses that may form implementation obstacles, the solid ground created by willingness to pay studies may overcome misperceptions by indicating the amount of risk that is associated with the implementation of user fees. Because such a WTP study clearly extends the existing knowledge base by replacing sole perceptions and gut feelings by actual data, it can perfectly function as a starting point to put user fees on the decision making agenda. With regards to the Eco²Fin framework, WTP studies can be seen as driving factors within the administrative domain.

Total economic valuation studies

Willingness to pay studies can be conducted as standalone research or as part of a total economic valuation (TEV) study. A TEV study is more elaborate as it includes all direct, indirect and non-use values. Thereby it gives a more complete picture of the benefits that are provided by a certain ecosystem. Cruz-Trinidad *et al.* (2011) state that such a study is a strong communication tool for stakeholders and decision-makers. With the inclusion of direct use values of ecosystem based activities, a TEV provides ground for more than just a recreational user fee system such as dive fees, and could support multiple user fees including fishing or harvesting and through-passing fees. Additionally, total economic valuation studies enable monetary damage assessments as was demonstrated on Sint Maarten (Bervoets, 2010a).

Awareness campaigns

Furthermore, Cruz-Trinidad *et al.* (2011) explicitly state that constantly communicating and mainstreaming evocative messages that envision the hidden and often indirect values of coral reefs through localised campaigns, is a critical challenge for the survival of the coral reefs that provide the ecosystem services in the future.

Road Signage

The non-compliance of visitors and operators to pay the set fee, even when mandatory and enshrined in law, is still a significant obstacle towards effective utilisation of user fees. As stated by Steckenreuter & Wolf (2013), encouraging visitors to pay the mandatory user fee can be a persistent challenge. However, their study shows that persuasive messages on road signs and in public areas enabled to reduce non-compliance rates by nearly 50 percent (Steckenreuter & Wolf, 2013). Their

main lessons are that creating place attachment for visitors and a feeling of perceived benefits of a park foster the compliance to rules and fee payment. To achieve this, they state that: *“Persuasive messages need to target salient beliefs that differentiate between compliers and non-compliers and that are relevant to the particular visitor community of a park.”* (Steckenreuter & Wolf, 2013). As means to accomplish increased place attachment and a feeling of perceived benefits, PA management can use the signs for (1) communicating all sort of benefits obtained during park visits; (2) for the marketing of important features and activities provided in the PA; (3) to appeal to people’s responsibility for the conservation of natural resources and (4) to promote that paying user fees supports conservation efforts and thereby has a good purpose (Kyle *et al.*, 2003). When applied appropriately, persuasive messaging is likely to increase compliance rates and in addition to that it may facilitate a more visitor friendly experience of PA management (Steckenreuter & Wolf, 2013). However, persuasive communication still clearly has its limitations and may not stop visitors with the wrong intentions to continue bad behaviour nor commit criminal activities (Hughes *et al.*, 2009).

Participatory management

Alternatively, when looking at protected area- and conservation management as being solutions to specific problems, Seixas & Berke (2004) state that: *“Although nation-wide efforts towards integrated coastal management are important, solutions to specific problems should be tackled at the scale that matches the problem to be solved.”* (based on Folke *et al.*, 1997). This taps onto the same societal developments that have been referred to in the introduction but also extends this to solutions for stakeholder conflicts at different political scales by stating that: *“Thus, efforts focusing on a particular locality using participatory approaches are likely to solve local management problems more effectively than regional or national approaches. Identifying stakeholder conflicts and their origins, together with stakeholder concerns, may be a first step towards an integrated coastal management. Conflicts and concerns usually point out the weakness of the current management arrangements, the main organisations involved as well as their capacities and vulnerabilities, and the major issues that have to be addressed.”* (Seixas & Berke, 2004). Although there may be general willingness to address a management issue, stakeholder conflicts persist due to governance failure.

Lack of social cohesion

Lack of cohesion between different stakeholder groups, limiting information exchange, results in management that is not integrated and subject to conflicts. In the case described by Seixas & Berke (2004), the main causes to persistent stakeholder conflicts and unsuccessful or inefficient management are the lack of social cohesion and faltering management not being integrated enough.

Lack of integrated management

Also with the implementation of user fees, these general schools of thought can occur to be strikingly important. The user fee mechanism is frequently referred to as a system, implying that there is a set of several factors and actors with multiple views interacting with each other and functioning as a whole (Tongson & Dygico, 2004). Therefore, the implementation process is not likely to be directed solely by one single actor and the use of participatory approaches can improve the implementation by more integrated management.

User participation

In particular, integrating user participation can broaden, diversify and extend the existing knowledge base for management significantly (McCay & Jentoft, 1996). An integrated knowledge base can comprise of scientific knowledge, traditional and historical knowledge, local practical knowledge, ecological data and socio-economic data from local to national levels (Seixas & Berkes 2003a;

Calheiros *et al.*, 2000; Olsson and Folke 2001). Combining these different sources of knowledge enables knowledge co-production where user knowledge can supplement scientific research when resources are scarce and research data are unavailable (Berkes *et al.*, 2001). In short, such an integrated knowledge base may serve the purposes of (1) providing a large set of information derived from a diversity of sources to optimally inform decision-makers, (2) minimise misunderstandings of problems among different stakeholders and (3) it provides input to management coordination at a larger scale enabling different policies to be more aligned (Seixas & Berke, 2004). Although it may not be possible to get different groups completely in line with each other, but building and sharing a common knowledge base may still take away misunderstandings (Seixas & Berke, 2004). Nevertheless, different stakeholders may reconsider their perspectives on the causes and consequences of management measures.

Overview

The results of the literature results section are summarised in table 2.

Table 2: Summary of literature results translated into drivers (D) and obstacles (O) within the categories Administrative, Environmental, Political, Financial, Social, Legal, Communicative, and Governance.

	Administrative	Environmental	Political	Financial	Social	Legal	Communicative	Governance
WTP studies	D						D	
TEV studies	D						D	
Awareness campaigns							D	
Road signage	D						D	
Participatory management								D
Lack of social cohesion								O
Lack of integrated management								O
User participation	D						D	

Willingness to pay studies, total economic valuation studies and awareness campaigns are highlighted as initial starting points for user fee implementation, being drivers in both the administrative and communicative domain. Road signage, participatory management and user participation are identified as main drivers to overcome obstacles, whereas the lack of social cohesion and lack of integrated management are notorious obstacles resulting from governance failure.

4.2 Interview results

Due to the limited time available for some of the interviewees being on busy schedules, in some cases the participation to this research was limited to e-mail conversations and questionnaires with roughly the same questions that were asked in the interviews. Although written answers did perhaps not provide the depth and nuance that could have been perceived in oral conversations, the results are still valuable and worth to mention. The cases from Saint Martin, Sint Maarten and Cayman Islands are described according to a questionnaire and e-mail conversation and the rest of the cases according to interviews. Any confidential information is carefully made anonymous or left out of the report.

Saint Martin

Table 3: General characteristics of user fee system on Saint Martin

State	Domain to which user fee is applicable	Type of user fee	Year of Implementation	Height of the fee	Successful	Compliance rate (estimate)	Complies to
Saint Martin	MPA 3060 ha	User fee for economic activities within MPA	2010	2 Euros Customer/Day	Yes	Medium	All MPA users

St Martin has been able to implement a user fee system for all economic activities in its marine protected areas of 2 Euros per customer per day. For the enforcement of the mechanism, high monitoring expenses and other administrative efforts form obstacles that limit the effectiveness of the fee. Other obstacles are the negative attitude of companies and business managers towards the marine park fee, as well as a lack of financial and political support from the local government.

Despite the social, political, financial and administrative obstacles, the user fee could still be established on national law. This example shows that the lack of political support and social resistance from local operators was overcome by legislative measures. Eventually the efforts resulted in a taxation system, rather than a user fee based on the willingness to pay concept, and a standard tax for trespassing the marine protected area was successfully implemented.

Sint Maarten

Table 4: General characteristics of user fee system on Sint Maarten

State	Domain to which user fee is applicable	Type of user fee	Year of Implementation	Height of the fee	Successful	Compliance rate (estimate)	Complies to
Sint Maarten	MPA 3100 ha	Dive fee	2010	USD 3 Person/Day or USD 15 Person/Year	Yes	50-70%	Divers

On Sint Maarten, a dive fee system was strategically included in the resolution that was drafted to appoint the marine park, in combination the management contract proposed to the Ministry of Economic affairs. The proposal was supported with a willingness to pay study that had been conducted among all dive operators using the area. The success factors for the user fee system of Sint Maarten were the use of stakeholder input for implementation and the fact that the system was established by law, including fines and sanctions associated with the non-payment of fees. An obstacle that still remains however, is due to the limited monitoring capacity that is needed for patrols and checks. The compliance rate is estimated at 50 to 70 percent.

Cayman Islands

Table 5: General characteristics of user fee system on Cayman Islands

State	Domain to which user fee is applicable	Type of user fee	Year of Implementation	Height of the fee	Successful	Compliance rate (estimate)	Complies to
Cayman Islands	All Cayman Islands territory	Cruise ship passenger fee	1997	CID 1.60 Person/Visit	Yes	High	Cruise ship passengers
		Airport departure fee	1997	CID 4 per Person/Departure	Yes	High	Airport departures

The Cayman Islands government has not opted for direct user fees for protected area financing. Marine Protected Areas, in place since 1986, have traditionally been funded by the core government revenue. There are limited terrestrial protected areas in Cayman Islands as it was only recently that legislation, National Conservation Law in 2013, was introduced to allow them to be established. Previously, the Cayman Islands National Trust had worked to protect terrestrially important areas through outright land purchase from government funding and international and local fund raising efforts.

The Cayman Islands Government currently operates on an environmental fee charged for all visitors to the island by cruise ships and by all visitors and residents alike departing by air. The Environmental Protection Fund was implemented in 1997 as departure tax, however despite effective collection the funding has remained largely unavailable for its intended purpose. The main success factor was that the existing tax collection mechanisms were already in place. The use of the funds collected was however very slow to come into effect because the necessary legislation and policy guidance was not established as originally envisaged.

The most significant consequences of the failed implementation of effective legal mechanisms and administrative structure occurred during specific external events. A large hurricane and a global recession meant that the Cayman Islands Government became financially dependent on the funds in the Environmental Protection Fund as security and to comply with local public and management finance laws. Due to these events, the generated revenue could not be used for conservation and although the mechanism was successful, the implementation success was limited.

Antigua

Table 6: General characteristics of user fee system on Antigua

State	Domain to which user fee is applicable	Type of user fee	Year of Implementation	Height of the fee	Successful	Compliance rate (estimate)	Complies to
Antigua	National Park, terrestrial	Entrance fee	N/A	USD 8 tourist/Day USD 3 resident/Day	Yes	N/A	Visitors of National Park

Over the last decades, nature conservation on Antigua was said to be hampered by the lack of trust among different stakeholder groups, resulting in persistent conflicts. Several NGOs are able to coordinate and manage different terrestrial areas and some small scale conservation efforts are managed in cooperation with the government. However, due to the limited budgetary support, some areas only exist as paper parks. The implementation of a user fee for marine areas was pushed by the fisheries division. The social resistance was due to the lack of effective, conservation targeted, management authorities instead of a consolidated part of the government. For effective management, an official management authority with a broad and representative mix of board members including, amongst others, local entities and user groups, is needed to gain political and societal support build trust. With bottom-up management and governance, support and commitment of local community groups can overcome administrative and financial obstacles and most importantly, social resistance. If this new governance structure can be achieved, the government and the different user groups know that this management authority is credible, so they are more likely to acknowledge and support the management. Hereby, social resistance is stated to be the most significant obstacle and an improved governance structure the main driver of success.

Jamaica

Table 7: General characteristics of user fee system on Jamaica

State	Domain to which user fee is applicable	Type of user fee	Year of Implementation	Height of the fee	Successful	Compliance rate (estimate)	Complies to
Jamaica	National Park, terrestrial	Entrance fee	N/A	Tourists: USD 10/ USD 5 adults/children Residents JAD 100 (USD 0.78) / JAD 50 (USD 0.39) adults/children	Yes	50-60%	National Park visitors

On Jamaica, entrance fees and user fees have been established for several terrestrial parks and conservation is generally supported by the government. Also a marine user fee is established although but it is opposed by local user groups because they object to pay extra fees while they already pay

taxes. Social resistance is the main obstacle for effective implementation of marine user fees, due to the underlying ‘tragedy of the commons’ principle. The fee is in place, while there is enough political and legal support but it still remains difficult to enforce due to lack of societal support. Compliance rates vary between 50 and 60 percent. Reflecting on the causes of the tragedy of the commons principle, lack of awareness is partly a communicative problem, while there is little explanation by the government on how the policies help to conserve and why this is important. To overcome the social resistance, strong awareness campaigns are an essential first step. The interviewee states that the most critical factors towards conservation success in general are that NGOs and the government should recognise each other as partners and furthermore that local communities should be involved in management. Thereby, improved governance is supposed to become the main driver of implementation success.

Trinidad and Tobago

Table 8: General characteristics of user fee system on Trinidad and Tobago

State	Domain to which user fee is applicable	Type of user fee	Year of Implementation	Height of the fee	Successful	Compliance rate (estimate)	Complies to
Trinidad and Tobago	Turtle nesting beach	Entrance fee	N/A	N/A	Yes	Low/Medium	Beach visitors
Trinidad and Tobago	Terrestrial PA. Trinity hills. 11,525 ha	Entrance fee	N/A	USD 5 per tourist Lower fee for residents	Yes	Medium	Park visitors
Tobago, North Eastern part	North East Tobago, marine areas	Dive fee	In process	Voluntary	No	Low	Divers

First interviewee

For Trinidad and Tobago, the biggest obstacles for nature conservation and user fee acceptance are that environmental awareness and willingness to pay of the local inhabitants are low. Depending on the height of the fee, user fees and nature fees have been accepted inconsistently by the local residents. For terrestrial parks, user entrance fees have been established up to USD 5 per tourist, but still a lower fee for locals. Moreover, a fee for a specific turtle nesting beach is set within the turtle nesting season but enforcement problems here occur due to the environmental characteristics of the beach. Fines for illegal beach entrance are in place, technically enabling enforcement, but as stated by the interviewee, when it is too busy it is difficult to restrict access.

Communication efforts are being made to overcome the disconnect from nature. However, awareness raising has not always led to behaviour change. In fact, the current disconnect between local residents and the islands’ natural resources is historically rooted in the industrialised economy, which is heavily reliant on oil and gas. On the other hand, the ecotourism sector, which generally drives sustainability, is very small on Trinidad and Tobago. With this combination, from an economical perspective, the natural resources have a relatively low importance for Trinidad and a shift towards more environmentally sustainable oriented policies remains a persistent challenge. So generally, social resistance against environmental user fees is the biggest obstacle and is now being counteracted with

communication efforts. However, it is not thought that sole communication efforts will be effective in overcoming the obstacles in a relatively short term.

Second interviewee

Another interviewee with specific in depth knowledge about conservation practices in North East Tobago was approached for a detailed explanation on the history and present status of user fee implementation. There have been no official user fees established, although in North East Tobago a voluntary system has been in practice for one year until deemed infeasible for the moment. The voluntary contribution could not be established in the way a mandatory fee would, whereas the dive operators were hesitant to ask customers to pay this voluntary fee without a legal mandate. A significant success factor for the implementation of a dive fee would be the appropriate target group while an estimated 70 to 90 percent of divers are tourists, very different compared to beach visits with a ratio of 20 percent tourists and 80 percent local residents.

The interviewee states that the most significant obstacles are to convince the local authority that is concerned, to create regulations and legislation, and to convince the users that it is worthwhile paying the fee. It requires work and resources, which makes the potential solution and driver of successful implementation to have most of the work done by other stakeholders. The best practices can be outlined, legislation should be written and finally it has to be put on the agenda of a decision-maker for approval. As a first step in assisting the government to make the regulation, a local WTP study shall be conducted to support the literature evidence and to involve dive operators in the implementation process. Furthermore, to convince the user group, a well-designed outreach and public relations campaign needs to be conducted. It is important that such an approach is accommodated and budgeted for in advance to guide the use of it and show positive impact.

So far, the implementation of a dive fee in North East Tobago has been hampered by administrative obstacles and the lack of a legal mandate. Proactive governance is the main driver of the implementation process as it mobilises stakeholders shifts the burden of work away from the government, making them better able to keep up with developments and give timely support where necessary. When a legal mandate for a user fee system is given by the government, the implementation is likely to be successful without further enforcement problems in North East Tobago.

Roatan

Table 9: General characteristics of user fee system on Roatan, Honduras.

State	Domain to which user fee is applicable	Type of user fee	Year of Implementation	Height of the fee	Successful	Compliance Rate (estimate)	Complies to
Honduras Roatan	Roatan Marine Park	Dive fee	N/A	<u>Voluntary basis:</u> 10 USD Person/Year	Yes	High	Divers

Roatan provides a special case of a well functioning user fee system that was not encountered in literature nor in any of the other interviews. Rather than mandatory user fees, an annual dive fee of USD 10 is established on a voluntary basis. The driving factor for the fee system is the diving community on Roatan, who initiated and still enforce it. Making the fee mandatory would involve

third party administration costs, which has been problematic with other sustainable finance mechanisms and might raise insurmountable administrative obstacles. The concerned mechanism was a mandatory fee for cruise ship passengers established to support conservation and marine park management. Although the revenue was already generated through this mechanism, the retrieval of these funds is still in process. Moreover, a once successful yachting and mooring fee was established, but this failed due to local politics and paperwork and further support is required to re-establish the fee system.

In general, limited administrative and financial capacity, together with political barriers, form the main obstacles towards further utilisation of the dive fee system. Social support has been the most significant success factor in implementation and combined with good governance resulted in an effective finance mechanism. For now, awareness raising helps to overcome obstacles and targeted communication enhances the compliance rate. Lastly, having the fee as a donation involved very little administration costs, nor monitoring and third party involvement and is therefore also a driver of success.

Bonaire

Table 10: General characteristics of user fee system on Bonaire

State	Domain to which user fee is applicable	Type of user fee	Year of Implementation	Height of the fee	Successful	Compliance Rate (estimate)	Complies to
Bonaire	MPA 27000 ha	Dive fee	1992	Initially USD 10 Person/Year Later USD 25 Person/Year	Yes	Medium/High	Divers

On Bonaire, a diver admission fee of initially 10 USD and eventually 25 USD per year could effectively be established through a revitalisation process of the marine park with money from the Dutch government. A combination of factors had led to the revitalisation of the marine park, which had been a paper park since three years after its establishment. The marine park was being revitalised with money from the Dutch government on two critical conditions: (1) A correct institutional structure for the marine park management needed to be established and (2) the park had to become self financing within the end of the term of the grant. Clearly, the second condition was a game changer for user fee implementation as it provided the incentive to set up the dive admission fee system which was legitimised by the outspoken government policy. It opened and catalysed the discussion and thinking process towards sustainable finance mechanisms. The discussion quickly went in the direction of the user pays principle, targeting the diving community. On the other hand, the first condition was concerned with the evident governance problems at the time. Rather than the self nominating board of the marine park management authority, the new structure needed to have the board representing island interest, conservation interest and user interest, all by one third. This co-management structure was a vital element of success.

Despite the social obstacles from the opposing dive industry that were almost insurmountable, the eventual persuasion and success had to do mostly with how the fee was implemented. Before the fee came into effect, it was already discussed what the money could be used for and what it could not be used for. Thereby, good governance, which was initially a weakness in marine park management of

Bonaire, became together with communication the success factors in the implementation while the political activities were the main driver of the process.

Saba

Table 11: General characteristics of user fee systems on Saba

State	Type of PA	Type of user fee	Year of Implementation	Height of the fee	Successful	Compliance rate (estimate)	Complies to
Saba	MPA 1300 ha	Dive fee	1991	USD 4 Person/Dive	Yes	High	Divers
Saba	MPA 1300 ha	Yacht fee	N/A	USD 3 Person/Day	Yes	High	Yachts moored at mooring
Saba	All of Saba's territory	Nature fee	N/A	USD 1 Person/Night	Yes	High	All tourists

On Saba, a dive fee of 4 USD per person per dive, a yacht fee and nature fee of 3 and 1 USD per person per night respectively have been established and reserved for nature conservation. Although the dive fee is already relatively high compared to other islands, usually an annual fee between 10 and 25 USD, the yacht fee and nature fee would preferably be higher due to higher maintenance cost. However, there is political resistance against raising the fees, due to perceived economic losses of lower visitor rates.

The main drivers for further implementation of the yacht and nature fee, i.e. raising the height of the fee, are communicative and administrative efforts. Lobbying and writing a strong proposal with a business case shall be key in overcoming political barriers.

BVI Tortola

Table 12: General characteristics of user fee system on Bonaire

State	Domain to which fee is applicable	Type of user fee	Year of Implementation	Height of the fee	Successful	Compliance Rate (estimate)	Complies to
BVI - Tortola	All marine territorial waters of BVI	Mooring fee	2004	USD 25 -55 Vessel/week [4-10 persons] + USD 5 per extra person	Yes	High	Vessels moored at moorings
				USD 50 -110 Foreign Vessel/week [4-10 persons] + USD 5 per extra person			
				USD 375 - 825 Vessel/year [4-10 persons]			
				USD 750 – 1,650 Foreign Vessel/year [4-10 persons]			

On Tortola, British Virgin Islands, a user fee permit structure was implemented for the use of moorings. The fees were collected in a triplicate manner by the companies, without on-site collection, based on mutual trust. Little auditing was required and administration costs were low, one of the main success factors of the implementation. Over the years, the cooperation with charter companies helped to sensitise various stakeholders to the need for fee collection and the relationship could effectively be enhanced.

In 2001, a major revision of fees which included not only marine fees but also the introduction of a terrestrial fee was implemented. Collection efficiency was an important factor in for designation of different fees. However, the regulations could only be established in 2003 due to social opposition. As there was still a subvention by the government, the public perceived that this should cover the management and maintenance of the sites. Besides that, there was a strong perception that the fee would discourage visitors from coming to the island. However, while the government was increasingly not disposed to increase the relative contribution to the trust, the trust had to identify sources of money that would provide for operations, technical development and maintenance. Therefore, it was supported by the government to implement the fee and with this mandate it was more legitimate to overrule the opposition.

Eventually, the fee could effectively be established with political support, giving the mandate to investigate self financing mechanisms for nature conservation. Thereby, social resistance, which was the most significant obstacle, could effectively be overcome.

Results overview

A schematic overview of the interview results is shown in table 13. The specific context derived from the interviews and the success factors and obstacles were divided in the aforementioned categories and translated into drivers and obstacles.

Table 13: Summary of interview results translated into drivers (D) and obstacles (O) within the categories: Administrative, Environmental, Political, Financial, Social, Legal, Communicative, and Governance.

	Administrative	Environmental	Political	Financial	Social	Legal	Communicative	Governance
Antigua	O			O	O			D
Bonaire			D		O		D	O + D
Cayman Islands	O + D		O	O	O	O		
Jamaica					O		O	D
Roatan	O + D		O	O	D		D	D
Saba	D		O				D	
Saint Martin	O		O		O	D	O	
Sint Maarten	O + D					D		
BVI - Tortola	D		D				D	D
Trinidad & Tobago	O + D	O			O	O+D	D	D

General insights from the results regarding the obstacles and drivers, are that the social and political situation tend to form obstacles, whereas governance and communication have been stated as drivers of the implementation. The administrative domain is mixed, in several cases forming both obstacles and drivers towards implementation at the same time. To illustrate an example of this: It can occur that certain administrative factors can drive the implementation process towards its establishment, but once the mechanism is established, enforcement can still be problematic due to different administrative factors, with low compliance rates as a result.

Except for the case of Saint Martin, it evident that a combination of both political and social resistance towards implementation are almost insurmountable obstacles. The only reason that it could still be successfully implemented on Sint Martin was through law enforcement. In addition to that, it stands out from the Sint Maarten case, that due to the fact that the user fee was established by law directly, there were no significant obstacles towards the initial implementation. Only administrative obstacles remain due to limited staff capacity. This shows how effective and powerful a legal mandate is.

5. Discussion

As emphasised in the introduction, it should be recognised that context specific circumstances play a role in the implementation success of any finance mechanism. The results encompass several implementation approaches that have been encountered in the analysis of the different cases and clearly show the diversity and frequency of obstacles occurring in the different cases.

5.1 Limitations of the research

The strongly divergent contexts and significance of obstacles indicate that none of the approaches encountered can be universally applicable to other cases. However, this structured review and analysis can function as a toolbox including different strategic approaches. Thereby, it can be used as a starting point for a new management plan whereas examples may spark inspiration and envision potential opportunities. As supported by Seixas & Berkes (2004) the most appropriate approach will depend on the political and cultural history of the area, the socio-economic conditions and environmentally specific aspects. The outcomes of revealing and structuring the relevant contextual factors should give researchers and practitioners an overview of those factors within and those factors out of reach from decision-making bodies.

A critical note to the results from literature is that the selection of literature is likely to be under-representative of the population of completed studies due to a generally acknowledged publication bias. The publication bias was defined as “*the publication or non-publication of studies depending on the direction and statistical significance of the results.*” (Rohstein *et al.*, 2006). Readers should bear in mind that in the broader literature and in reality the contextual factors can be less clearly expressed or possibly show less significant effects. Furthermore, it should be emphasised that most of the case results are illustrated with the insights from just one interviewee per case, which is rather limited to provide full exposure of the complete case and its context. However, it was clear that the extensive background knowledge from the interviewees was in line with the written reports, other grey literature and peer reviewed papers. Therefore, the sample group meets the required representativeness and credibility standards.

5.2 Lessons learned

A frequently encountered argument in the cases of Bonaire, Saba, British Virgin Island and Trinidad & Tobago and stated by More & Stevens (2000) and Park *et al.* (2007), is the fear of economic losses due to lower visitation rates resulting from user fee implementation. Moreover, the perception of user fees being restrictions on the use of resources that have always been freely accessible was also emphasised in interviews with stakeholders from Antigua, Jamaica, Saint Martin, British Virgin Islands, Trinidad & Tobago and stated by Buckley (2003). These principle grounds still prove to be difficult to overcome in these aforementioned cases, but willingness to pay studies provide solid grounds to put this issue on the agenda. A WTP study clearly extends the existing knowledge base by replacing sole perceptions and gut feelings with actual data. It is well realised as a strategic instrument to convince decision-makers (Cruz-Trinidad *et al.*, 2011).

In addition to that, Ahmed *et al.* (2007) explicitly highlight the roles for advocacy, education and awareness campaigns as means to enhance the WTP values for the management of natural resources. Cruz-Trinidad *et al.* (2011) state that special emphasis on the evaluation of both the resource’s economic and non-use values is important. These non-use values are typically envisioned through WTP studies.

Alternatively, it is realised the cases of Antigua, Jamaica, Trinidad & Tobago and stated by Seixas & Berke (2004), that stakeholder conflicts and governance failure should be tackled at the scale that matches the problem to be solved (based on Folke *et al.*, 1997). With special emphasis on community involvement it is argued that the origin of stakeholder conflicts can be identified and misunderstandings can be unravelled by creating an integrated knowledge base (McCay & Jentoft, 1996; Seixas & Berke, 2004).

6. Conclusion and recommendations

User fee systems are effectively utilised in different places throughout the Caribbean and provide sustainable financial resources that successfully enable and support conservation efforts. The main advantage of this market mechanism is that it alleviates the reliance on philanthropic and political trends that are out of reach from PA managers and subject to unpredictable but significant fluctuations. However, user fees also prove to be infeasible, impracticable or otherwise too challenging in several cases, limiting the capacity to raise revenues in order to finance conservation efforts. The most challenging obstacles that limit or constrain user fee implementation are social and political obstacles, especially the combination of both. Non-compliance rates due to social resistance prove to be a persistent challenge as emphasised both in literature and interviews. The Roatan and Cayman Islands cases also reveal significant political obstacles due to problematic collection systems to limit the effectiveness of well functioning user fee mechanisms.

The most significant drivers of user fee implementation lie in the governance and communicative domain. Several cases have reportedly emphasised that willingness to pay studies prove to be vital assets to gain solid ground for the implementation of user fees, both as a strategic instrument and indicator of social supporting capacity. Furthermore, effectively targeted local campaigns and the use of persuasive messaging on road signs and in public areas have in some cases resulted in significant increases in compliance rates. The use of community building and bottom-up approaches to policy making on small island developing states also stand out to this research. It is emphasised by several cases both in literature and by three national coordinators of the Small Grants Program, located in Jamaica, Antigua and Trinidad & Tobago that stakeholder conflicts can effectively be overcome by community-based management.

Moreover, it is evident from the cases on Bonaire and the British Virgin Islands show that when the government gives a mandate to start implementing ways of self financing, this catalyses the process significantly. In addition to that, as the investigation and implementation is legitimised, the public opposition can be overcome more effectively.

The categories as described in the Eco²Fin framework have been extended with two categories of obstacles and drivers i.e. governance and communicative. Governance is characterised by its process oriented focus, emphasising the interaction between different stakeholders. Communicative drivers and obstacles generally encompass awareness of management, regulations and general environmental awareness.

Lastly, to push this research a leap forward, it could possibly be revised with anthropological perspectives on cultural and historical aspects of the different cases. Ultimately, the goal of this case study research approach was to find more general patterns in island specific circumstances related to the success and potential of user fees, but this is clearly not possible within the current scope of research. By integrating anthropological insights it becomes more feasible to link the cultural and historical aspects that characterise societal traits to give insight in the evolution of change. This might enable to draw more general conclusions and also possibly enhance the applicability of the Eco²Fin framework.

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Annex I – Saint Martin

Saint Martin has been able to implement a user fee system for all economic activities in its marine protected areas of 2 Euros per customer per day. The fees are monthly collected from dive centres, day charters and several rental operators. As notified, it takes the conservation organization a lot of effort and monitoring expenses while each company needs to be met, called and often recalled to get their message across. Furthermore, sometimes the marine park management team has to threaten to prohibit park entrance before the companies eventually pay the fee. Still, some of the operators declare less customers since the implementation of the dive fee and in some cases they collect more money than they are supposed to for the fee, to keep part of it as profit to themselves. These examples clearly reflect administrative obstacles that limit the user fee effectiveness due to a lower efficiency.

According to the interviewee, many operators perceive the fee as a loss of their profit, rather than a gift directly from the tourists to the conservation organisation and few companies present the fee as a support tool for marine park management. This appears to be rather a communicative obstacle.

Apart from the negative attitude from companies and business managers towards the marine park fee, the interviewee also declares that the local government has hardly ever supported the nature conservation of St Martin. Both the lack of financial and political support from the local government, can be identified as obstacles towards implementation. However, while the user fee was established on national law it could be implemented as a standard tax for trespassing the marine protected area. Moreover, it could be adapted to include a local fee over economic activities within the MPA. This example shows that lack of political support and resistance from local operators was overcome by legislative measures. Eventually the efforts resulted in a taxation system, rather than a user fee based on the willingness to pay concept.

Annex II – Sint Maarten

Sint Maarten included the user fee mechanism in the resolution which was drafted to appoint the marine park, in combination with the management contract that was proposed to the Ministry of Economic Affairs to be able to manage the area. To support the proposal, the results of a willingness to pay questionnaire, that was conducted among all dive operators that would eventually use the park, were presented to the Ministry of Economic Affairs. The Ministry decided on the level of the fee and gave permission for the collection through the signed management agreement between the management authority and the Ministry.

The implementation turned out to be successful because the fee system was established by law and had fines and sanctions associated with the non-payment of fees. In fact, one dive operator was banned from using the marine park while not having the required tags when being controlled by the marine park patrol. According to the interviewee, both using stakeholder input for the implementation and having the fee structure established by law were the main success factors in the case of Sint Maarten.

However, enforcement is still a big challenge on Sint Maarten due to the limited monitoring capacity to address constant patrols and checks. The compliance rate is estimated at 50 to 70 percent, withholding approximately a third to half of the revenue.

Annex III – Cayman Islands

The Cayman Islands government has not opted for direct user fees for protected area financing. Marine Protected Areas, in place since 1986, have traditionally been funded by the core government revenue. There are limited terrestrial protected areas in Cayman Islands as it was only recently that legislation (National Conservation Law 2013) was introduced to allow them to be established. Previously, the Cayman Islands National Trust had worked to protect terrestrially important areas through outright land purchase from government funding and international and local fund raising efforts.

The Cayman Islands Government currently operates on an environmental fee charged on visitor to the island by cruise ships and by all visitors and residents alike departing by air. The Environmental Protection Fund was implemented in 1997 as departure tax, however despite effective collection the funding has remained largely unavailable for its intended purpose. The main success factor was that the existing tax collection mechanisms were already in place. The use of the funds collected was however very slow to come into effect because the necessary legislation and policy guidance was not established as originally envisaged.

The most significant consequences of the failed implementation of effective legal mechanisms and administrative structure occurred during specific external events. A large hurricane and a global recession meant that the Cayman Islands Government became financially dependent on the funds in the Environmental Protection Fund as security and to comply with local public and management finance laws. Due to these events, the generated revenue could not be used for conservation and although the mechanism was successful, the implementation success was limited.

Annex IV – GEF Small Grant Programme

Global Environmental Facility (GEF) Small Grant Programme

From the interviews I conducted with national coordinators of the Small Grant Programme from Jamaica, Antigua and Trinidad & Tobago, I learned about their strong willingness to implement community based management. With an emphasis on community building and involving community groups to the highest level of policy making, the interviewees declare highly positive results of these approaches in solving stakeholder conflicts and in local capacity building, enhancing trustworthiness and effectiveness of policies in place. Furthermore, through these bottom up approaches, the process towards implementation could be streamlined and compliance rates to user fees increased.

Annex V - Antigua

Over the last decades, nature conservation on Antigua was said to be hampered by the lack of trust among different stakeholder groups, resulting in persistent conflicts. Several NGOs are in place, able to coordinate and manage different terrestrial areas, and several small scale conservation efforts are managed in cooperation with the government. However, the budgetary support is too little and some of the areas are in practice just parks on paper, with lack of management as a result of the financial situation.

The lack of visible and effective management authorities is again a cause of failed implementation of a user fee system that was tried to be established. As mentioned by the interviewee, one of the reasons why the fee structure did not succeed was that it was being pushed by the fisheries division. Presumably, local user groups would not be willing to pay for a fee going to a consolidated part of the government flowing to all kinds of expenditures, as they perceive the current taxes to be high enough already. A fee, earmarked and solely used for conservation and an official management authority in place, making sure that the funds are used solely for conservation, is however more likely to be accepted.

In order for the official management authority to be effectively established, it was emphasised by the interviewee that a broad mix of members in the board is necessary to get enough supporting capacity. Different local entities should be included to represent their interests and to gain political and societal support, ultimately to get government ministries such as the ministry of environment on board. Furthermore, willingness to cooperate critically depends on the trust factor and is needed to activate and utilise traditional local knowledge systems, thereby enabling a flow of information. When communities, government departments, NGOs and actors from the private sector all discuss at the same table and in a bottom-up manner, decisions can be made together with high supporting capacity.

Regarding management support, through the support and commitment that has been created with the bottom-up governance, many of the administrative and some financial obstacles can be overcome. With the local knowledge systems already being reached, field monitoring is still covered by e.g. fishers that advice on changes and other observations they recognise whereas there is currently no capacity to go out in the field on a regular basis. In general, all the community members act as rangers and pass their information forward to each other and to the government.

As capacity is increasing, more and more challenges can be taken. Once new initiatives are established with community support, there is a lobby for the up scaling of these projects to be supported by the government. The government gets committed and empowers the projects in that way. Furthermore, the government is also a critical actor to eventually get legislation established and secure the progress. The interviewee strongly emphasises that multi-stakeholder partnerships are key, while never one party or one person has all wisdom in lease. Especially when making decisions that have an impact on people's lives without discussing this with them, i.e. top-down procedure, will evoke a significant amount of public resistance.

All in all, change can move fast with very little financial resources. Both the amount of field observations and input in policy making processes are of incredible value and push processes further. The information flow is key and stated as the underlying success factor of this governance approach.

When information comes out it can be acted upon in the most suitable manner without wasting time and resources. The power of the people is most important on Antigua and therefore efforts are best mobilised by bringing all key stakeholders, including local communities, on board and where necessary have them assisted and educated for effective participation.

If this new governance structure can be achieved, the government and the different user groups know that this management authority is credible, they are more likely to acknowledge and support the management.

Annex VI - Jamaica

On Jamaica, entrance fees and user fees have been established for several terrestrial parks and conservation is generally supported by the government. A variety of conservation events is organised and designated areas are managed by local NGOs. These attract tourists as well as local users. Depending on the area and event or activity, fees are set between USD 20 and USD 100 per person. The implementation of marine fees has been more problematic. Although there is lots of activities by e.g. fishermen, some of them rejected to pay fees in the past. The establishment of a marine park fee has been opposed by locals because they object to pay more money. In turn, this has had a significant influence on the government, as the local opposition makes enforcement difficult. The implementation led to group demonstrations which could not be controlled, nor ignored. Local residents as well as dive operators declare that they oppose the payment of a fee in particular, whereas they rather help out with conservation efforts as a form of contribution. Furthermore, local residents do not see the reasoning behind paying extra fees while they already pay taxes.

As notified, social resistance is the main obstacle for effective implementation. Local inhabitants do not want to pay for access, and the perception towards natural resources reflects the well-known 'tragedy of the commons' principle. The government does not communicate and explain enough about what the money is used for and to what extent their policy helps. This has resulted in a lack of awareness, which creates misunderstandings about environmental protection. According to the interviewee, strong awareness campaigns shall be the first step forward and it should be the government taking this role.

The interviewee states as one of the most critical factors towards success, that the relationships between NGOs and the government should improve and they should recognise each other as being partners. NGOs should be government consultants and furthermore community knowledge and skills should be incorporated in management. When bringing in community members right at the start of a project, the government shall know what is being supported and what is being opposed already before negotiations start. Furthermore, to achieve behaviour change, the inclusion of communities is critical, rather than just advocating with awareness campaigns.

The headlines derived from the interview are that the fee is in place, there is enough political and legal support for it but it still remains difficult to enforce due to lack of societal support. Compliance rates vary between 50 and 60 percent, so there has been some good progress, though there is still room for improvement.

Annex VII – Trinidad & Tobago

First interviewee

Protected areas in Trinidad and Tobago are still relatively new as opposed to the further developed environmental management in the Antigua and Jamaica cases described above. A number of five areas has been identified to be protected, however, without real enforcement or a management structure being in place. On top of that, a few areas in North East Tobago have been earmarked by the government to become designated as protected areas. Still it remains difficult to enforce legislation and to develop a user fee system due to the current lack of management. According to the interviewee, the general environmental awareness of the public is low, which leads to resistance when limiting the access to a particular natural resource. Thereby, it forms a big obstacle for effective nature conservation. Depending on the height of the fee, user fees and nature fees have been accepted inconsistently by the local residents. For terrestrial parks, user entrance fees have been established up to USD 5 per tourist, but still a lower fee for locals. Moreover, a fee for a specific turtle nesting beach is set within the turtle nesting season. Enforcement problems here are due to the environmental characteristics of the beach, which is easily accessible and is not gated off or barricaded. Still tourists that have not paid a fee can enter the beach whereas another park in the mountains has no other access possibilities apart from the entrance. Fines for illegal beach entrance are in place, technically enabling enforcement, but as stated by the interviewee, when it is too busy it is difficult to restrict access.

Tourists are perceived to have a higher willingness to pay while they visit a park specifically for a certain experience. The lower willingness to pay from local users goes back to education, awareness and appreciation of the values natural resources. As a means to overcome this, communication efforts such as free guided tours in a park once the entrance fee has been paid and signage are being made to overcome the disconnect from nature. However, awareness raising does not always lead to behaviour change. The disconnect between local residents and the island's natural resources is rooted in the history of Trinidad and Tobago where the economy is heavily industrialised and reliant on oil and gas. On the other hand there is only very little income from ecotourism, which generally drives sustainability. With this combination, from an economical perspective, the natural resources have a relatively low importance for Trinidad and a shift towards more environmentally sustainable oriented policies remains a persistent challenge.

Second interviewee

Another interviewee with specific in depth knowledge about conservation practices in North East Tobago was approached for a detailed explanation on the history and present status of user fee implementation. There have been no official user fees established, but in North East Tobago, dive centres have been encouraged to collect a voluntary contribution from tourists that was similar to a dive fee for conservation. However, the voluntary contribution could not be established in the way a mandatory fee would, whereas the dive operators were hesitant to ask customers to pay this voluntary fee without a legal mandate. Rather than having the sense of begging for a donation, sharing a message that can refer to regulation is much easier and acceptable. The implementation effort was continued for one year until deemed unfeasible for the moment. The interviewee feels that it is the ways humans interact in reality, that forms a barrier to insist on someone's voluntary contribution. It is too uncomfortable to push your customers into a certain direction without putting pressure on them.

On the other hand, with a mandatory dive fee established with regulation, the interviewee has no doubt that the user fee system would be successful.

In addition to that, the interviewee strongly believes that revenue generated through user fees should flow directly into conservation activities that should be published in various media. That way, anyone paying the fee sees directly where the money goes to.

Furthermore, the interviewee emphasises that there is a difference between the potential for general user fee implementation, and the implementation of a dive fee. In any of the Caribbean countries and in general tropical dive destinations worldwide, between 70-90 percent of divers are tourists. On the other hand, for general beach visits and bathing activities the tourist and local residents ratio is estimated at 20 percent tourists and 80 percent local residents. The target group clearly has an influence on implementation potential and should be recognised beforehand. It depends on the user group and whether there is a difference when the natural resource is thoroughly and culturally used since many years by residents compared to when fee is charged on a general tourist activity. Tourists are considered as an easier target group, as long as they see the efforts go somewhere. Residents and citizens that have deep roots in a certain area and traditional user rights, would have a problem with restricted access. Infringing the traditional user rights of a user group will lead to strong public opposition, being an insurmountable obstacle for implementation.

The interviewee states that the most significant obstacle is to convince the local authority that is concerned, to create regulations and legislation. It requires work and resources, including e.g. legal advice and involving somebody that has a good idea on how such a regulation works in other places. The additional work for the government is the obstacle, which makes the potential solution to have most of the work done by other stakeholders. Work should be prepared, best practices outlined, legislation should be written and finally it has to be put on the agenda of a decision-maker for approval. At the same time, when NGOs do the work, they have solid grounds to argue that the money should flow to them, whereas if the government has made most of the effort, they will argue that a part of the raised fees should go into the general government budget. In the end, the fees could be state managed, co-managed or NGO managed and it is critical that the regulation addresses how funds have to be handled. As a first step in the design process of the fee, everybody who is interested in the implementation to generate some additional revenue should be appeased and decide on a work plan.

Moreover, the second most important obstacle is to convince the user that it is worthwhile paying the fee. This requires a well-designed outreach and public relations campaign. If the users are hesitant and do not see what the fees are being used for, there will be problems with willingness to pay resulting in low compliance rates. Therefore it is important that such a fee is accommodated and budgeted for in advance to guide the use of it and show positive impact.

In response to the question whether dive operators and the government would fear economic losses as a result of the fee, the interviewee argues that this could easily be overcome by demonstrating various willingness to pay studies that have been conducted throughout the region. These studies indicate that users are willing to pay a certain amount and that the dive tag, as form of a token received after payment, are generally treated as a souvenir or collectable. As a first step in assisting the government to make the regulation, a local WTP study shall be conducted to support the literature evidence and to involve dive operators in the implementation process, which is of critical importance as well. It would contribute significantly if these user fees are considered at a multi-stakeholder level including the involvement of ministries, village councils, religious organisation, traditional users and tourists.

Annex VIII - Earliest dive fee systems Caribbean

The earliest cases of dive fee systems in the Caribbean were on Saba and Bonaire respectively starting the implementation process in 1991 and 1992. The implementation took approximately one year for each of the islands. As stated by the interviewee, this was, in contrast to terrestrial park fees, groundbreaking for the Caribbean region. Whereas in the Eastern Pacific, marine resources have traditionally been managed and are issued as properties that can be owned, for the Caribbean region they are generally treated as common pool resources. As ingrained in the Western way of thinking, there is a general preconception that marine resources belong to everyone and there should be unlimited use and access to them. This is in strong contrast with the general perceptions of terrestrial resources. According to the interviewee, terrestrial entrance fees or tourist charges have unquestionably been implemented with a high degree of success throughout the Caribbean and it is a standard practice around the world. This statement is in line with most anecdotal information from other interviewees and generally widely recognised.

Annex IX – Bonaire

On Bonaire, the diver admission fees could effectively be established through a revitalisation process of the marine park with money from the Dutch government. A combination of factors had led to the revitalisation of the marine park, which had been a paper park since three years after its establishment. During that period, there was no active management apart from occasional mooring maintenance by dive operators themselves. The interviewee mentioned that the key factors were: (1) The personal interest from a higher up person in the Dutch air company KLM, and a personal interest of Prince Bernard from the Dutch royal family. They both had an affection with the island and in favour of nature conservation. Moreover, (2) funding initiatives and ideas came from scientists and the World Wildlife Fund the Netherlands and sparked the discussion on the use of sustainable finance mechanisms. Lastly, (3) the vested interest in the tourism industry from the local government was a key factor. Although within the government there was little understanding of the reasoning behind marine park management by the time, there was strong realisation of the economic benefits from the booming tourism industry. The government of Bonaire recognised the increasing numbers of tourists visiting the island without understanding why. Moreover, they thought the dive industry was going to destroy the marine resources, an unfounded but persistent belief at the time. Eventually, the government came to senses that management was needed and sent out a request for support and applied for funding.

As a result of that, the so-called CABNA fund was approved and consequently the marine park was being revitalised with money from the Dutch government on two critical conditions: A correct institutional structure for the marine park management needed to be established and the park had to become self financing within the end of the term of the grant. By the time, there was little realisation of the potential of finance mechanisms and no one thought of finding solutions in the way that is done today.

Clearly, the second condition was a game changer for user fee implementation as it provided the incentive to set up the dive admission fee system which was legitimised by the outspoken government policy. It opened and catalysed the discussion and thinking process towards sustainable finance mechanisms. The discussion quickly went in the direction of the user pays principle, targeting the diving community.

On the other hand, the first condition was concerned with the evident governance failure at the time. Rather than the self nominating board of the marine park management authority, the new structure needed to have the board representing island interest, conservation interest and user interest all by one third. Thereby, the organisation was controlled by a co-management structure which was a vital element of success. From the start of the restructuring, the industry was part of the management structure and knew what was going on so instead of than being imposed on, the industry was brought in. This made sure that once something was being implemented, the key stakeholders would not feel threatened by it anymore and resist to cooperate. As much as possible the marine park management made sure the implementation was doable, not negatively impacting any other parties.

However, there was enormous amount of opposition from all sectors with a tourism interest. The dive industry was the main driver of the island's economy, and they were heavily dependent on marketing and advertisement abroad to attract tourists. As there was no internet, there was no chance of

broadcasting information about the island without help from third parties. It turned out that the marketing organisations were strongly against divers being charged for diving in a certain place and they threatened to block all advertisements of diving on Bonaire. So the island economy was under threat of losing its biggest driver being the dive tourism and thereby, the opposition was very understandable. Nevertheless, the divers themselves agreed with paying the fee and supported the user fee system. It turned out that the advertisement companies in the outside world were out of touch with the actual divers.

Despite the social obstacles from the opposing dive industry that were almost insurmountable, the eventual persuasion and success had to do mostly with how the fee was implemented. Before the fee came into effect, it was already discussed what the money could be used for and what it could not be used for. The unique selling point was that the money went directly in the fund and it was bound by law that the money could only be used for the pre-set targets. Furthermore it was critical that the dive operators themselves were not targeted at all, just a fee for their customers. Besides that, the dive operators recognised their business depended on the marine park. However, a compromise to have the fee being valid for 12 months rather than a calendar year had to be made to get the dive industry on board.

To emphasise the contextual factors that played a significant role in the implementation success, it was due to the grounded restructuring and search for self-financing structures of the marine park management that created supporting capacity. The two conditions for revitalisation of the marine park coming together, made that the fee system could be implemented and accepted.

The interviewee grasped a few critical success factors that emphasise the importance of the right strategic management, providing lessons which can be drawn upon by many of the Caribbean islands due to the similar contexts.

When setting up the marine park and user fee system, the management was looking for ‘win-win’ solutions. On Bonaire there was a whole restructuring of the park and during that process, one of the vital elements was to choose for an inclusive approach. Choosing a way of working together with the diving industry, instead of imposing on them, turned out to give a positive impulse to the implementation success. Right from the start, the industry part of the management structure and knew what was going on. This made sure that once something was being implemented, the key stakeholders would not feel threatened by it anymore. As much as possible they made sure the implementation was doable, not negatively impacting any other parties. On top of that, the dive operators and other users were provided with such tangible benefits, that they wouldn’t argue against it anymore. In the end, proper maintenance of the park had been established without the dive operators paying any money for it.

About the management itself, it had to be made sure that the benefits for other stakeholders were unarguable for the period of three to five years after implementation. The most important aspects of that were mooring maintenance and visibility of park management. When a mooring went down, the dive operators could call and it would be fixed within 48 hours. Regarding the visibility of management towards divers, signage was put in place and flyers and stickers were spread in combination with orientation maps. As a result of that, divers became vested in the marine park existence and management and metaphorically, visitors were not paying for a fee, they were buying one.

One last overarching comment by the interviewee, particularly emphasising the importance of contextual factors, was a reference to a study done in the Philippines analysing the success of user fees. For every park that had succeeded in user fee implementation, there had been a clear threat involved, that had pushed the implementation through. Translated to Bonaire, it appeared that the government was afraid that the dive industry was destroying the reefs surrounding the island, and thereby the economy. Every regulation on marine management was an effort to limit the impact of divers on coral reefs. According to the interviewee, the government's impression on the diving industry formed part of the backdrop on which anything else happened, as the underlying threat provided a powerful motivation for change.

Annex X - Saba

On Saba, a dive fee of 4 USD per person per dive, a yacht fee and nature fee of 3 and 1 USD per person per night respectively have been established and reserved for nature conservation. Although the dive fee is already relatively high compared to other islands, usually an annual fee between 10 and 25 USD, the yacht fee and nature fee would preferably be higher due to higher maintenance cost. However, there is political resistance against raising the fees, due to perceived economic losses of lower visitor rates.

The main drivers for further implementation of the yacht and nature fee, i.e. raising the height of the fee, are communicative and administrative efforts. Lobbying and writing a strong proposal with a business case shall be key in overcoming political barriers.

Annex XI – Roatan

Roatan, a small island being part of Honduras and the wider Caribbean region, provided a special case of a well functioning user fee system that was not encountered in literature nor in any of the other interviews. Rather than mandatory user fees, an annual dive fee of USD 10 has been established on a voluntary basis. With ca. 10.000 fees being paid per year, this voluntary mechanism supports the Roatan Marine park by approximately a quarter of its budget. The initiative once started by the dive community, which has been conservation oriented and supportive towards coastal management, and is still enforced by them. While voluntary, the fees are technically donations, allowing them to go directly towards the Roatan Marine Park management without intervention of third parties. This proves to be an essential aspect in order for the fee to be able to deliver to conservation. The interviewee illustrated this with several examples that emphasise the limits of what is within their reach.

The Roatan marine park management, together with a defined technical committee, established a mandatory fee for cruise ship guests to support conservation and marine park management. However, while the revenue was already generated through this mechanism, the retrieval of these funds is still in process. A once successful yachting and mooring fee was established, however this failed due to local politics and paperwork and further support is required to re-establish the fee system. According to the interviewee, the system functioned well and generated a significant amount of revenue for conservation, even with the monitoring and maintenance included.

Making the dive fee mandatory comes with the same risk as with the cruise ship, yachting and mooring fees, whereas the way the user fees are currently managed, directly with the donors, gives more freedom of choice on how to spend the money. In the end, this also incentivises the donors while they know their money ends up in conservation, rather than third party administration costs. Overall, the step towards making the fee mandatory is still under significant consideration and doubts. It will surely involve implementation costs that are not needed for the current voluntary fee. Furthermore, with already limited staff capacity, the monitoring costs may become problematic and it is hard to estimate how much these costs are going to be. Developing technological ways of auditing and collecting the fees, to reduce labour intensity, shall be of critical importance. In general, limited administrative and financial capacity, together with political barriers, form the main obstacles towards further utilisation of a user fee system.

Nevertheless, there is still ways identified to improve the voluntary user fee system that is currently in place and better partnerships with other NGOs, private sector and the government are being established in order to generate more support. A new organisation with a ‘501c3’ status was established in the United States, which opens channels to donors to donate with the entitlement to tax exemption by U.S. law. This makes it even more attractive for visitors to pay. Furthermore, awareness raising helps to overcome obstacles as it gives the opportunity to show that protection is needed. These efforts are targeted at enhancing the compliance rate within the existing user fee system. Apart from the user fee implementation, communication about how revenue from user fees is being spent and on how the education efforts that are being made generates more support from private organisations, which is also an important target group. Private sector investments and donations are most beneficial to the organisation as they go around politics.

With regards to the relationship between NGOs and government on Roatan, improvement is being made by giving everybody their own responsibilities on a contractual basis, established in a common management plan. According to the interviewee, a neighbouring island had to deal with the same situation and once the relationship with government and other NGOs was improved, finally a mandatory fee was successfully established. Although the risk of government rejection of a mandatory system, possibly also taking the voluntary system out of practice, is too big, it may still be interesting for the future.

Annex XII – British Virgin Islands, Tortola

On Tortola, British Virgin Islands, a user fee permit structure was implemented for the use of moorings. The fees were collected in a triplicate manner by the charter companies, without on-site collection, based on mutual trust. Little auditing was required and administration costs were low, one of the main success factors of the implementation. Over the years, the cooperation with charter companies helped to sensitise various stakeholders to the need for fee collection and the relationship could effectively be enhanced.

In 2001, a major revision of fees which included not only marine fees but also the introduction of a terrestrial fee was implemented. Collection efficiency was an important factor for the designation of different new fees. However, the regulations could only be established after a lot of conversations and dialogue in 2003 due to social opposition. As there was still a subvention by the government, the public perceived that this should cover the management and maintenance of the sites. Besides that, there was social resistance due to a strong perception that the fee would discourage visitors from coming to the island. However, the government was increasingly not disposed to increase the relative contribution to the trust. Therefore the trust had to identify sources of money that would provide for operations, technical development and maintenance. It was supported by the government to implement the fee and with the mandate to become more self sustaining it was more legitimate to overrule the opposition. Furthermore, the advocacy and elaborate communication were key factors of the implementation success.

The key success factor was that the government was looking for ways to supplement their contribution and there was consensus that the trust needed to implement the fee to rely less on the government. Ultimately, in this way the burden of maintenance could be shifted to the user, instead of something that the government had to support. The second key factor was the emphasis on the value of the maintenance program that could effectively be made clear to the stakeholders involved.