Integrating Community-based Conservation and Development.

A Comparative Case Study of Forest Conservation Projects in Ethiopia and Cambodia.

Helena M. Nielsen

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University College Fryslân, Campus Fryslân, University of Groningen

Supervisors: Prof. Dr. Caspar van den Berg and Alexandre C. Belloir

ABSTRACT

International development aid has become subject to scrutiny, as a number of large-scale projects have failed, alienating communities through top-down implementation, and a lack of long-term commitment. Reflecting on these experiences, community-based projects have been increasingly acknowledged as a more effective method to foster sustainable development. However, policy-makers are not only faced with the challenge of improving livelihoods, but also the onset of climate change impacts, which are threatening marginalised communities in the Global South. Consequently, there is a need for development projects that effectively combine livelihood improvement with conservation strategies. It remains unclear, however, how these two targets can be married, which strategies can foster their success, and which methods prove counterproductive. To answer these questions, an extensive literature review has been conducted, analysing practices suggested by theory and experiences gained so far. To test the findings on their validity and identify novel approaches, a cooperative case study of community-based forest conservation projects in Ethiopia and Cambodia was performed. The research reveals that locally-based projects are more effective than top-down strategies, as they aim to draw from communities' skills and resources, for the benefit of all members. Key strategies were identified fostering the success of community-based development and conservation projects, including iterative project designs, community-led and -created management institutions, and sustained capacity building. Critical challenges remain in regards to income generation and the equal distribution of benefits among community members. Based on these findings, a number of recommendations for development practitioners and policy-makers are drawn, including the diversification of income-generating activities, the establishment of knowledge infrastructures, and better representation of indigenous experiences in research.

Keywords: Development, Conservation, Community-Based, Projects, Ethiopia, Cambodia, Forest Management, Coffee Production, Ecotourism

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TABLE OF CONTENTS

LIST OF ABBREVIATIONS

CBET - Community-based Ecotourism

FMA - Forest Management Association

FMG - Forest Management Group

MDGs - Millennium Development Goals

MoE - Ministry of Environment

NTFP - Non-timber Forest Product

PFM - Participatory Forest Management

SWFLG - South West Forest and Landscape Grouping

SDGs - Sustainable Development Goals

WCC-PFM - Wild Coffee Conservation through Participatory Forest Management

INTRODUCTION

The Sustainable Development Goals (SDGs) were launched in September 2015, as part of the United Nations's post-2015 development agenda. The SDGs, unlike their predecessors, the Millennium Development Goals (MDGs), are not only focused on eradicating poverty; rather, they lay out a blueprint for sustainable development for all countries, including economic, social and environmental targets. However, the goals will remain just that - a blueprint - unless governments and organisations work together on their effective implementation (Gaffney, 2015; Stafford-Smith et al., 2017).

While the SDGs are the result of the most comprehensive consultation in the UN's history, they build on decades of movements and theories, the learnings of which feed into modern development strategies (Stöhr, 1980). International development aid has come under scrutiny in recent decades, as many projects and initiatives have failed, not only in provoking changes for the better, but in fact often leaving communities alienated and worse off than they were before an intervention (Mansuri & Rao, 2004). Many prominent initiatives follow a top-down paradigm of development, based on the belief in trickle-down effects. However, such approaches tend to benefit already privileged actors, neglecting the needs and knowledge of local people, and discourage collective action (Toko, 2016; 2019; Stöhr, 1980). Consequently, faced with these failures, there has been a sharp rise in calls for a more holistic development approach, focusing on local solutions to global problems.

At the same time, climate change is predicted to adversely affect the environment, and already impacts societies around the world today (IPCC, 2014). Glaciers are shrinking, precipitation is getting stronger and extreme weather events, such as heatwaves, are increasing (Huber & Gulledge, 2011). These changes imply negative consequences for human health and security, but are also degrading our ecosystems (Patz et al., 2005). Many species are shifting habitats and a great number will face extinction if temperatures continue to rise (EC, n.d.). However, the severity of climate change impacts varies over space and time, and developing countries are especially vulnerable (IPPC, 2013; Mertz et al., 2009). Consequently, development projects are needed that combine livelihood improvement with conservation strategies, fostering development fit for the 21st centuries' challenges.

The important role of local communities in conservation and natural resource management has been increasingly recognized since the 1980s, as the result of past failures of centrally planned projects, and government-controlled management (Toko, 2016). However, it remains unclear how local, community-based projects can successfully combine livelihood and conservation strategies. This paper

therefore aims to answer: **How can community-based development approaches effectively balance livelihood security and environmental conservation?** In exploring this research question, the study aims to dive into the specifics of community development, creating a comprehensive account of the principles and strategies that constitute successful conservation and development projects. In order to do so, two projects from Ethiopia and Cambodia will be analysed in detail, revealing methods that can guide development practitioners and policy-makers in their decision-making. While researchers have analysed community-based projects on development and conservation and conducted individual case studies, there is a significant gap in the literature on projects that tackle both targets at the same time.

To structure the research process and organise findings, the research question was divided into five sub-questions: (1) How do we conceptualise development? (2) What are the differences between top-down and bottom-up development approaches? (3) What factors characterise community-based development projects? (4) Which strategies have contributed to the success or failure of community-based development and conservation projects? (5) Which local experiences can guide project design and conduct in different contexts? The background section details key terms, gives insight into critical development theory, and explains the difference between development from ‘above’ and ‘below’. The literature review examines important papers in the field, building the foundation for the case studies. These are structured along the lines of a descriptive and an analytical part, investigating the applied livelihood and conservation strategies, their outcomes, as well as the community engagement methods. Finally, the discussion compares the two cases, and links results back to existing research. In doing so, this paper contributes to policy-making for community-based projects and advances research on innovative development in times of climate change.

BACKGROUND

Important Definitions

Development

The twenty-first century's economic and environmental crises have reignited debates about development, modernity, and democratic change (Asher & Wainwright, 2019). Development in itself is a vague and all-encompassing term, which has different interpretations of its meaning. At the most basic level, development insinuates growth and progress, a process bringing about good change (Naz, 2006). Sumner and Tribe (2008) identify three main historical perspectives on what good means in this context. After the Second World War, development was envisioned as structural transformation bringing about the liberation of people (Gore, 2000). Towards the end of the 20th century, the perception of development became more closely connected to the work of international development agencies, and defined in terms of poverty reduction and the achievement of the MDGs. Simultaneously, a more critical perspective emerged, questioning the work that was being conducted under the umbrella of development around the world. This group of writers - broadly identified as 'postmodernists' - assert that development functions as a discourse, creating its own realities and shaping global power relations (Sumner & Tribe, 2008). The Society for International Development (2021) gives insight into a more contemporary definition of the term, constituting that "development is a process that creates growth, progress, positive change or the addition of physical, economic, environmental, social and demographic components." The purpose of development is said to lay in the improvement of people's quality of life, and the creation of income opportunities, while emphasis is put on achieving this without inflicting harm on the environment. In light of these different perspectives, this paper works with the following definition: the process through which peoples' livelihoods are improved (both socially and economically) with a sustained positive impact on their well-being.

Conservation

Conservation is identified as "the action of conserving something" by the Oxford English Dictionary. It gives two related meanings of the verb *to conserve* in this context: 'to prevent the wasteful over-use of a resource' and 'to protect from harm or destruction'. These definitions allude to two central points for conservation scholars. For some, the emphasis of sustainable handling in the second description gives a crucial characteristic of conservation separating it from preservation, which is based on maintaining wilderness free of people (Sarkar, 1999). However, Sandbrook (2015) offers the following definition of conservation which will be applied in this paper: 'actions that are intended to establish, improve or maintain good relations with nature'. This definition emphasizes that conservation is a proactive rather

than a passive method, and acknowledges that conservation practices can create both new relationships with nature and strengthen established ones. Sandbrook also acknowledges that not all practices are fruitful, despite good intent.

Actors

It is also important to lay out the terms used to describe the different actors involved in community-based projects. Particularly the description of countries in which development projects are conducted has sparked debate. A variety of terms have emerged, most of which aim to distinguish between countries which are conceived to have experienced 'good change' and those which have not (Sumner and Tribe, 2008). Post-modernists contend that any label suggests developing countries' inferiority, and therefore contributes to the power exerted over them (Sumner & Tribe, 2008). It is to be acknowledged that if possible, places should therefore always be named directly, instead of described by an umbrella term. Nevertheless, when discussing global dynamics it is indispensable to make use of some categorization to avoid endless listings of countries. Historically, the term 'Third World' has been used the longest to refer to countries receiving development aid. The expression originated in the context of the Cold War, to refer to a group of newly autonomous countries affiliated with the 'non-aligned movement', meaning, they were neither aligned with the USA nor the USSR. However, in the beginning of the new millennium the term lost importance, as many criticized the hierarchy it implies (Sumner & Tribe, 2008). As a more concrete categorization, the World Bank developed labels based on gross domestic product: low income, lower middle income, middle income and high income countries. While metrics seem to be an impartial way to divide the globe, compiling data can be difficult, and the measure is inherently economic (Silver, 2015). Today, most speak of 'developing countries', a term also used by the United Nations and recommended by The Associated Press Style Guide. However, some scholars denounce that the term reinforces stereotypes, and paints 'developed' countries as an ideal others have to achieve (Silver, 2015). The expression 'Global South' was coined as a more accessible and value-free alternative (Mitlin & Satterthwaite, 2012). It has grown increasingly popular in recent years, signaling a change away from a primary emphasis on growth and cultural differences, and emphasizing the relevance of geopolitical ties (Dados & Connell, 2012). It will therefore be used moving forward in this analysis.

Development From Above and From Below

Theoretically, top-down and bottom-up development policies co-exist, interact, and impact the same stakeholders, but have shown limited coaction and assimilation due to their stark differences (Crescenzi & Rodríguez-Pose, 2011). Stöhr (1980) offers a comprehensive analysis of these differences which can aid in understanding the theoretical roots of community-based approaches.

Development From Above

A top-down paradigm presumes that development can only be sparked in a limited number of dynamic sectors and urban clusters, from where it trickles-down to surrounding sectors and areas. Consequently, such development policies have spotlighted capital-intensive, industrial and urban development, and place emphasis on economies of scale (Stöhr, 1980). The paradigm assumes a universal framework of development, value structures, and human happiness, which disperses across the world naturally or through policy action. Mounting evidence suggests that top-down development policies have failed to raise or even maintain living standards in the Global South, at least not within a socially or politically sensible time frame (Stöhr, 1980; *see also* Mansuri & Rao, 2004; Altieri & Masera, 1993). The underlying economic development paradigm does not reflect the principles central to many communities in the Global South, and neither fosters their autonomy nor stability. Often it is quite the opposite, as dynamics of globalisation force countries to adapt to the industrialized world and fill narrow economic niches left (Stöhr, 1980).

Development From Below

Bottom-up practices aim to harness the full extent of a community's skills and resources to benefit all members on a social, economic, and political level, and therefore clearly depart from the primarily economic concept of development (Stöhr, 1980). The paradigm presumes that regional differences in living standards emerged following large-scale economic integration and the belief in a uniformly applicable development approach. Development from below recognizes a variety of development concepts, depending on a region’s environment, history, cultural, and institutional conditions (Stöhr, 1980). All of these factors are said to offer important development potential, which should not be subordinated to the short-term goals of externally-controlled markets. Following these hypotheses, the stimulus for the conceptualisation and execution of development concepts must come from within communities. Respective policies place emphasis on small projects, regionally-organized basic needs services, labour-intensive activities, and rural development. One of the benefits of working with communities directly lies in their potential for informal small-scale interaction, drawing from interpersonal social relations, group identity, and solidarity (Stöhr, 1980).

METHODOLOGY

To answer the research question, this study draws from a number of sources that provide both qualitative and quantitative data. Qualitative research produces rich, detailed and contextualized findings on the studied issue; whilst quantitative data adds specifics for the case descriptions and contributes to the understanding of global dynamics that impact the results.

Literature Review

The literature review provides a comprehensive picture of the research that has already been done on community-based development and conservation projects. Moreover, it offers the theoretical framework later applied to my case studies. To identify the main themes in research on community-based projects in the development studies literature, I searched through Google Scholar and WorldCat for state-of-the-art peer-reviewed papers without geographic or date restrictions. The searches were conducted between January and March 2021, using the following keywords: ‘community-based’, ‘development’, ‘projects’, ‘conservation’, ‘bottom-up’, ‘participation’, ‘engagement’, ‘environment’, ‘strategies’. From the generated articles a selection was made, based on predetermined criteria. Articles were prioritized in regards to the content’s relevance to the aim of my research, the source’s reliability, and the recentness of the paper. I focused on papers that engage substantially and deliberately with the research subject and prioritized those which were cited often in the literature. Based on these criteria, 14 peer-reviewed papers were selected. The aim of the literature review was to establish a baseline understanding of whether and how earlier research conceptualized and evaluated community-based projects.

Case Study

In addition to the literature review, two case studies were conducted to identify relevant characteristics and strategies of successful community-based development and conservation projects. Case studies offer the benefit that they are able to represent the ‘lived reality’ of the matter at hand, giving room to perspectives of a broad range of stakeholders (Reis, 2009). For this paper, the case studies were compared in a structured manner to identify factors that for both projects resulted in success or failure. These hold the potential to be applicable on a broader scale. The research followed a purposeful design; the cases were chosen because they are information-rich and insightful, presenting practical exemplifications of the studied phenomenon. In addition, the cases had to meet a number of criteria to be considered for the research. (1) The project had to be community-based and include both conservation and development targets. (2) The project had to be operating for at least ten years, to allow for an adequate evaluation. (3) The cases had to be located in different cultural contexts to allow for cross-cultural applicability of

results. (4) The projects had to have a common denominator, either in their development or conservation approach, to be properly comparable. Given this list of criteria, two cases emerged as most suited for the purpose of this study. Case study A is based in south-western Ethiopia, looking at a Participatory Forest Management project that combines forest conservation and the cultivation of shade coffee. Case study B is located in Chambok, Cambodia where forest conservation is married with ecotourism. The conservation approach is therefore the binding element, giving coherence to the analysis. While the divergence in livelihood strategies seems to limit the cases' comparability at first sight, this set-up in fact contributes to the generalizability of findings, and shines light on two important income generating activities in the Global South.

The data for the case studies was collected through a careful document review of peer-reviewed papers, project reports, briefing notes, brochures, and external evaluations. Academic papers were collected in May 2021 from Google Scholar and Worldcat, using the following keywords for case study A: 'Ethiopia', 'Participatory Forest Management', 'Sheko', 'Bench Maji', 'Coffee', 'Conservation', 'Project', 'Community-based', and 'Development'. For case study B 'Ecotourism', 'Cambodia', 'Chambok', 'Conservation', 'Project', 'Community-based', and 'Development' were used. The search yielded 14 peer-reviewed papers and five documents from the grey literature for case A, and eight peer-reviewed papers and three documents from the grey literature for case B that were used for this research. The case analysis follows a unique case orientation, presuming that each case is special, preserving and documenting their specifics. Moreover, it is context-sensitive; it places outcomes in a social and historical context, avoids making broad generalizations, and instead focuses on diligent comparison. Based on this framework, a number of categories were predetermined to structure the comparative case study: (1) Conservation and Livelihood Goals; (2) Community-Engagement and Implementation; (3) Conservation Outcomes; (4) Livelihood Changes; (5) Enabling Factors; and (6) Challenges.

Validity and Reliability

The research design of this study implies a number of uncertainties that were taken into account during the research process. Firstly, working with two case studies allows to investigate the research objectives in a comprehensive and in-depth manner, however, the limited number of cases potentially undermines opportunities to make broad recommendations based upon the findings. Secondly, qualitative research always runs the risk of subjective interpretation; based on the same information different conclusions might be derived. Thirdly, the scope of this research did not allow for on-site research and perspectives of locals consequently had to be obtained through the accounts of others. These limitations were anticipated in advance and adequately accounted for. Generalizations run the risk of bringing with them exceptions,

and while this study only analyses two cases, the criteria list for their selection ensures the cases' quality and representativeness. Moreover, the literature review grounds the analysis within established research outcomes that were derived through a multitude of research designs (Reis, 2009). Finally, results are framed and stated with due precaution, and possibly confounding factors are dissected in the discussion.

LITERATURE REVIEW

History of Community-based Development

Community-based development approaches bring with them a long history of movements and theories, the learnings of which feed into modern development strategies (Stöhr, 1980). As one of the first, Gandhi promoted ideals of small-scale development and village self-reliance, which fed into a first wave of participatory development in the 1950s, which, by 1960, had spread to more than 60 countries in Asia, Latin America, and Africa (Gandhi, 1962; Mansuri & Rao, 2004). However, this dynamism dried up in the early 1960s, when a great deal of pessimism entered development institutions about the potential of local collective action (Hardin, 1992; Olson, 1973). There was a strong impetus for the state to provide public goods, regulate common-pool resources, and strengthen private property rights (Mansuri & Rao, 2004). These strategies were followed until, in the mid-1980s, critiques about development work once more gained traction. At this point, many sweeping development programs initiated by states performed poorly, and rapidly deteriorating common pool resources brought about negative environmental and socio-economic consequences. These issues revived the enthusiasm about local resource management and decision-making (Mansuri & Rao, 2004).

The World Bank made an effort in the early 1990s to encourage more participatory approaches (Keare, 2001). However, institutional changes were missing, and social scientists, such as Escobar (1995) and Scott (1998), argued that development from above was not only ineffective but actively disempowering people. Escobar's central argument contends that development operates as a discourse that proliferates structural inequalities for the Global South. For him, development as a concept is rooted in the West's 'convenient discovery of poverty' in the Global South, allowing it to maintain moral and cultural preeminence beyond colonial times (Reid-Henry, 2012). At the same time, projects like the Iringa Nutrition project in Tanzania, and the Self-Employed Women's Association in India, presented highly successful examples of community-based initiatives (Krishna et al., 1997). Moreover, Ostrom (1990) published an impactful article on the management of common-pool resources, bringing forth evidence that local institutions often oversee common-pool resources very effectively. Equally, Sen's (1985) effort to move the emphasis away from material well-being and toward a broader 'capability' strategy continues to shape development debates.

Merging Development with Conservation

Since the 1990s, paradigms of development have increasingly merged with conservation, and shifted towards community participation and traditional knowledge systems. Among various factors, this development has been sparked by the Brundtland Report, which portrayed development and

conservation as opposites of one coin (WCED, 1987). Since then, environmental organizations have progressively acknowledged development needs, while development organisations started to embed environmental rhetoric into their strategies (Campbell & Vainio-Mattila, 2003). This dynamic was accelerated by rapid growth in foreign aid spent on environmental conservation (Wells & Brandon, 1993). Major development organisations, including USAID and the German Development Agency, have extended their portfolio in conservation projects, given they draw a link to socio-economic development (Agrawal & Gibson, 2001). These projects aim to reconcile biodiversity conservation and development interests of multiple stakeholders. Putting communities into focus, locals can participate in the planning and implementation of conservation strategies, and receive economic benefits from environmental conservation (Campbell & Vainio-Mattila, 2003). The success of fulfilling these objectives depends on the strategies employed, including the extent of the rights devolved, the trust between communities and governments, government support, as well as the capacity of communities to create strong local institutions, and the establishment of a sense of ownership (Charnley & Poe 2007; Ribot et al. 2010; Amaha et al. 2013).

Approaches

There are a number of different approaches aiming to combine community-based development and conservation. In this paper, participatory forest management (PFM) and community-based ecotourism (CBET) for forest conservation will be taken into focus.

Support for devolved forest management has been increasingly reflected in environmental policy-making, and around 25% of forests are now under local leadership in the Global South (Tolera et al., 2015; White & Martin 2002). PFM has been defined by the FAO (2016) as “processes and mechanisms which enable people with a direct stake in forest resources to be part of decision-making in all aspects of forest management”. In its implementation, this entails forest management systems in which government authorities work together with communities to agree on rights of forest resource use, develop management responsibilities, and lay out how benefits will be distributed (Farm-Africa & SOS Sahel Ethiopia, 2007). Through this process, actors aim to enhance livelihoods and promote biodiversity conservation at the same time (Tolera et al., 2015). This goal is based on the hypothesis that sustainable forest management is most successful when the local population develops a sense of ownership of the forest areas (Ostrom, 1990; Agrawal & Ostrom, 2001). The government only plays a facilitating and monitoring role, including the creation of local institutions (Tolera et al., 2015).

The idea of ‘ecotourism’ emerged at the beginning of the 1980s and is defined by the International Ecotourism Society as ‘responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education’ (TIES, 2018). It was envisioned as a method to increase funding for environmental protection, raise local people’s awareness of the value of their natural resources, and create financial benefits for preserving them (Toko, 2019). Clearly, ecotourism requires natural resources attractive to tourists, and it is believed that these can generate economic benefits for locals. Following this vision, CBET has been used increasingly to involve communities in conservation, particularly forest protection, and to improve their well-being (Lonn et al., 2019).

Challenges

The existing literature on community-based development and conservation projects highlights a number of challenges to be overcome. Mansuri and Rao (2004) point to the difficulty in defining the boundaries of a ‘community’; often it would be the parameters of the project envisioned that construct the community practitioners select to work with, presumed to be one homogenous entity (Hackel, 1999). Botes and Van Rensburg (2000) note that it is often the most vocal, wealthier, and educated groups that get the chance to collaborate on projects. The exercise of one's voice and choices can be costly, due to the time commitment necessary for participation (Masuri & Rao, 2004). Moreover, it can put stress on disadvantaged members, as genuine participation may necessitate holding positions in opposition to influential groups. Especially given the public nature of consultations, they are often shaped by local power relations and authority. Another issue observed is gate-keeping by local elites, and organisations may interject themselves, preventing direct communication between the development agency and the recipients (Botes & Van Rensburg, 2000). However, such exertion of power might also be executed by governments. Participation can offer a convenient legitimation of the political system and can be abused as a tool of social control. Governments in facilitating countries, on the other hand, often exert pressures for swift results, creating a conflict between delivery and adequate participation (Botes & Van Rensburg, 2000).

CASE STUDY

Case Study I: Wild Coffee Conservation through Participatory Forest Management (WCC-PFM)

Description

Geographic Context

Ethiopia is located in the Horn of Africa, home to more than 112 million people (Wakjira, 2006; UN DESA, 2019). The country is predominantly agrarian; almost 80% of Ethiopians live in rural areas and agriculture accounts for 90% of exports (UN DESA, 2019; Gobeze et al., 2009). Ethiopia is one of the most biodiversity-rich countries in the world, and the country's forests play an especially important ecological and economic role (Caldecott, 1994; Wakjira, 2006). Functions include foreign currency earnings and contributions to the GDP, but also livelihood support for thousands of rural communities, which rely on the provision of non-timber forest products (NTFPs), such as fruits and vegetables, honey, and medicinal plants (Gobeze et al., 2009; Nischalke et al., 2017). Nevertheless, Ethiopia's forests have been significantly diminished; while 35% of land area was covered by forest at the beginning of the twentieth century, only 16% were left in the 1950s (EFAP, 1994; Reusing, 1998; WBISPP, 2004).

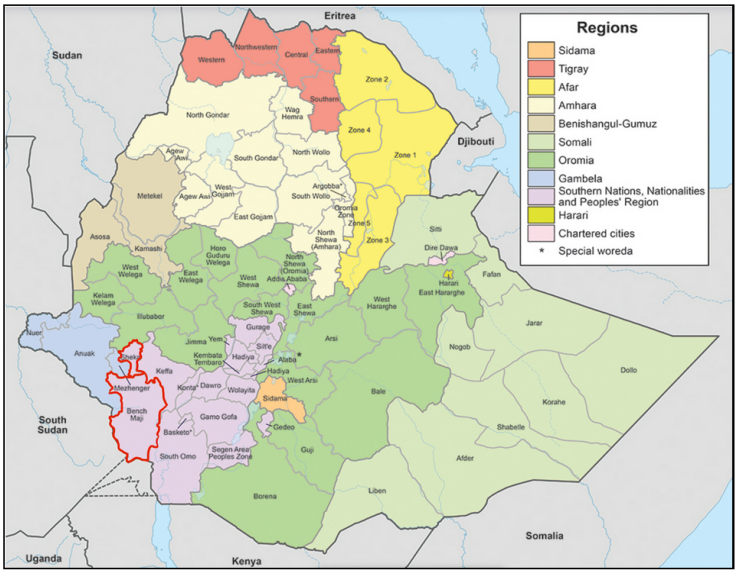
Coffee Arabica

Ethiopia's Afromontane forest is the birthplace of *Coffee Arabica*, and worldwide the only place where this plant grows wild as an understory shrub (Tesfaye, 2006; Wakjira, 2006). Ethiopia's coffee sector contributes about 10% of GDP, and generates 70% of incoming foreign exchange (Tolera et al., 2015). The production of coffee is largely dependent on smallholder farmers, and overall, coffee production, processing, and marketing employ 25% of the population (Wakjira, 2006). However, coffee resources are threatened by the continuous forest loss, while some production methods contribute to deforestation (Tolera et al., 2015). Especially during the 1990s, many forest edges were turned into 'coffee forest' in which ground cover vegetation and lower shrubs were taken out, and partly turned into large-scale plantations (Wood et al., 2019; Moguel & Toledo, 1999; Perfecto et al., 1996).

Project Site and Stakeholders

The University of Huddersfield managed the project from 2010 until 2016 in collaboration with other members of the South West Forest and Landscape Grouping (SWFLG), including the Ethiopian Ethio-Wetlands and Natural Resources Association and the Dutch NGO Sustainable Livelihood Action. The SWFLG describes itself as an "informal grouping (...) interested in the development of an ecologically sound and socio-economically sensitive approach to the management of the southwest

landscapes of Ethiopia" (Freeman & Hesselden, 2015:5). The WCC-PFM project is located in Ethiopia's Sheka and Bench Maji Zone (*see* Map 1). Here, approximately 30,000 people live around three critical forests, Guraferda forest in Guraferda, Kontir Berhan and Amora Gedel in Sheko (SWFLG, n.d.). More than 5700 individuals are directly engaged in Forest Management Groups (FMGs) and agricultural co-operatives that have emerged from the project (SWFLG, n.d.). Apart from local beneficiaries, the SWFLG also sees the coffee market and coffee drinkers worldwide as beneficiaries, gaining from the preservation of unique wild coffee genetic resources (SWFLG, n.d.).



Map 1: *Regions and zones of Ethiopia (Sheko and Bench Maji circled red; Adeto, 2020)*

Analysis

Goals

The WCC-PFM project aims to achieve a win-win goal, improving the contribution of the area's forest to rural development, while contributing to the conservation of wild coffee (Tolera et al., 2015). By maintaining the biodiversity in the forest, it is hoped that the required conditions for in situ conservation of wild coffee can be preserved. Moreover, the conservation of the forest can also contribute to global carbon storage and possibly generate income through REDD+ payments (Wood et al., 2019). The community-based approach aims to ensure the sustainability of the project by embedding conservation in the daily lives of the communities. By empowering them to manage the forest resources independently and creating income streams from their environment, conservation targets of superregional importance are aimed to be achieved and local living standards significantly improved (SWFLG, n.d.).

Engagement and Implementation

When designing the project, staff engaged in participatory learning to understand the cultures and indigenous knowledge of the ethnic groups in the region and their relationship to the forest (Tolera et al., 2015; Wood et al., 2019). Representatives of the government were also involved to assess how forest management could develop and what traditional institutional arrangements already exist. Forms of community forestry management in Ethiopia were reviewed, and shared with the communities in Sheko and Bench Maji who then chose the association format of their liking, situated one level below the lowest government authority (Wood et al., 2019). In the following, communities were involved in negotiations on forest boundaries and demarcation, as well as the formation of FMGs (Said & O'Hara, 2013). In total, 55 FMGs were established, comprising more than 5,700 members. In addition, a number of regional Forest Management Associations (FMAs) were formed which can legally represent FMGs. FMGs and FMAs are financed through a share of the profits made from community cooperatives and membership fees. Together, the FMGs manage 60,242.5 hectares of natural forest and 16,283.2 hectares of coffee forest (*see Table 2*; SWFLG, n.d.). Natural forest has remained generally untouched and is home to the in situ wild coffee plants, while the coffee forest is used for more intense shade coffee cultivation (O'Hara, 2016). In collaboration with the government, and resulting from a five-year consultation process, a regional forest policy was developed recognizing community ownership and user rights (Wood et al., 2019).

District	**FMGs Established**	**Total Members**	**Coffee Forest (ha)**	**Natural Forest (ha)**
Sheko	38	3,734	13,456.6	15,316.05
North Bench	7	435	0	784.2
Yeki	3	902	0	786.02
Guraferda	7	706	2827	43,356.19
Total =	55	5,777	16,283.17	60,242.46

Table 1: *Number of FMGs and ha secured by PFM agreements (SWFLG, n.d.)*

These steps followed an iterative process throughout which plans were adapted to match community priorities, and institutions adjusted along practical considerations (Wood et al., 2019). The project team positioned itself in a facilitating role, allowing the communities to develop and lead activities themselves (SWFLG, n.d.). Along with the setup of the FMGs, FMAs and regulations, the project team invested

much time in awareness creation and skill development (Tolera et al., 2015). Actors were trained in self-monitoring and needs assessment to conduct flexible management, and in strategies to ensure equal opportunities for all community members. The experience from setting up this PFM project was then used in support of policy development across different regions (SWFLG, n.d.).

Conservation Outcomes

The usage of forest products is now severely restricted, as opposed to the prior open access status. In consequence, unsustainable production of timber, firewood and construction wood has notably declined (Lemenih & Hesselden, 2016). Wood et al. (2019) and the SWFLG itself have conducted research on land cover change at the project site, yielding different numbers that, nevertheless, both indicate a positive contribution to forest preservation. According to Wood et al. (2019), 0.18% of forest was lost within the PFM annually, compared to 2.60% outside the project area. The SWLFG (n.d.) measured 1.08% of forest loss inside the PFM, compared to 15.57% in the surrounding areas. These differences are likely due to the radius that was drawn around the project site defining 'non-project areas'. The notable difference in both measurements between the two areas is striking, given the strong demand for new farmland in the region (Wood et al., 2019). However, the higher forest loss rates outside the PFM site might also be due to higher population densities and better accessibility (Ameha et al., 2016).

Wood et al. (2019) also evaluated changes in forest density, diameter distribution, and density of wood species, as well as carbon stocks and biomass. Changes were measured across the project's lifetime and compared between the natural and coffee forest. Looking at forest density, the density of small woody species had declined by 6% in the natural forest, while larger woody species increased by 6%. This may be attributed to younger plants growing into the 'larger woody species' category. In the coffee forest, the density of small woody species increased by 13.8%, given an increase in planted coffee. At the same time, species higher than 10cm declined, including the loss of very mature trees. This may be due to the death of older trees, or targeted cutting to open the canopy for higher yields (Tolera et al., 2016). Tolera et al. (2016) also assessed species richness and noted a significant decline in the coffee forest, while it was maintained in the natural forest. In regards to diameter distribution, the natural forest was home to more species in lower diameter classes, showing a gradual decline of species numbers in the different layers. This indicates a healthy forest. In the coffee forest, on the other hand, a high number of species was found in the lower diameter class, but considerably less in the other categories. This sharp decline across classes indicates that the forest is not healthy. These results fit the development of the forests' carbon stock and biomass. In the natural forest, these increased by 22%, compared to the coffee forest, in which the cutting of vegetation led to a decline of about 12% (Wood et al., 2019). Contributions to the national REDD+

program in the natural forest might provide communities with additional income (Sutcliffe et al., 2012). Forest fires and illegal logging have also decreased, according to local observations (SWFLG, n.d.).

Livelihood Changes

Within the scope of the WCC-PFM project, three forest product co-operatives were created, marketing honey, forest coffee, and wild coffee. Links to national markets were strengthened and new connections to international markets built. The coffee produced was ranked as top quality: the Forest Coop coffee was awarded Grade 3 and the Wild Specialty achieved Grade Q2; the first time this rating was given in the Bench-Maji Zone (*see Table 2*). The cooperatives were able to sell the wild coffee at three times the average for non-wild produce, the highest price ever paid for sun-dried coffee from Ethiopia. Productivity was also enhanced for wild honey and links to national and international markets were established (Freeman & Hesselden, 2015).

Name of Co-operative	**Total Members**	**Type of Product**	**Kg**	**Price/kg**	**Revenue (Ethiopian birr)**
Forest Coffee Marketing Cooperative	78	Forest coffee	2,135	114	243,641
Amoragedel Wild Forest Product Marketing Cooperative	54	Wild coffee Baboon coffee	1,799 2	127 2000	229,002 1,600
Mejenger Honey Producers Cooperative	45	Honey	45	45	34,200

***Table 2**: Co-operatives established by WCC-PFM (Freeman & Hesselden, 2015)*

Community members' ownership feeling of the forest increased on average from 1.86/10 to 8.14/10, and with this sharp growth, the motivation to manage forests rose from 1.14/10 to 8.86/10. Especially women's ownership feeling was very low before the project (1.00, men: 1.89), but eventually exceeded that of men with 9.00 (men: 8.11). This finding could be attributed to women traditionally not being integrated in forest management decision-making, while the project set emphasis on equal opportunities for both men and women to participate (Lemenih & Hesselden, 2016).

The higher market prices achieved for forest products as well as the improvements in harvesting, production, and processing allowed for a 69% rise in household incomes from coffee and a 275% increase from honey (*see Figure 1*). Before the project, households earned on average 9,921.05 Birr annually from coffee; today, this value is close to 47,000 Birr (Lemenih & Hesselden, 2016). Figure 1 visualizes how

households' income sources have shifted from a predominant use of wood and hunting to forest coffee and honey. Despite these significant improvements, the restriction of access to forest resources negatively impacted some poorer households and minority groups who were heavily dependent on forest extraction (Lemenih & Hesselden, 2016).

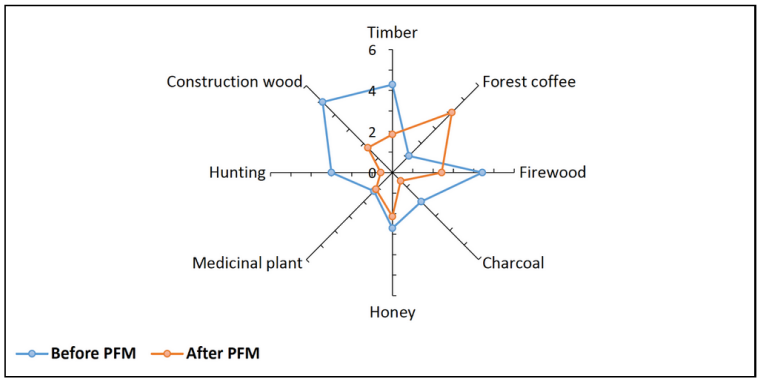


***Figure 1**: Shift in product use before and after WCC-PFM (Lemenih & Hesselden, 2016)*

Enabling Factors

A number of factors can be identified that have contributed to the success of this community-based project. To begin with, the region's terrain and location were favourable to PFM, as a strip of coffee forest surrounds large parts of the natural forest (Wood et al., 2019). This created a buffer making the agricultural appropriation of natural forest less enticing (Ameha et al., 2016). The project design enabled local communities to create institutions and build capacity for sustainable forest management (Tolera et al., 2015). The development of this ownership evolved through a 10-year iterative process, and the creation of institutions followed the subsidiary principle; the management committees were established at the lowest appropriate level. This ensured that communities identified with their forest area and that management practices were adapted to local circumstances (Wood et al., 2019). Moreover, the democratic process through which committee members were elected contributed to the sustainability of the project (Said & O'Hara, 2013). Another enabling factor was the timing of implementation and its response to felt needs in the communities. Only a short time before the WCC-PFM, a large share of nearby forest had been lost, spreading fear among locals for the forests they are dependent upon. The project was therefore welcomed, especially as it prioritised community rights (Wood et al., 2019). Moreover, the livelihood strategies implemented were familiar to the population, as local smallholder farmers had already been harvesting wild coffee and forest honey. The strategy of the project also matched wider economic dynamics, as speciality organic products are increasingly demanded, especially by European customers

(GIZ, 2016). Finally, the project aims to impact the wider Ethiopian policy environment and contribute to a community of practice (Arts & Koning, 2017).

Challenges

Despite the success of the project in both the conservation and livelihood dimension, some challenges remain. Freeman & Hesselden (2015) offer a comprehensive overview of production, purchasing and export issues present towards the end of the project (*see Table 3*).

Step	**Issue**	**Consequence**	**Countermeasure**
Production	Illegal plot holders restricting access to wild coffee.	Reduced amount of coffee collected.	FMA and FMGs engage with plot holders.
	Customary ownership of some areas restricts access for coffee pickers.	Reduced amount of coffee collected.	Meetings with the respective ethinc groups so they can benefit from high prices achieved by the Co-ops.
	Varying performance of coffee pickers.	Reduced amount of coffee collected.	Clear criteria of who should become a collector, re-selection and training each season.
Purchasing	Some larger traders offer to pay more (often illegally) → unfair competition.	Co-ops pushed out of the market.	Co-op members receive dividend payment and sale price for coffee, benefits of co-op explained to farmers not yet a part.
	Transport between buying and drying centers expensive.	Costs impact profits.	Transport costs will always be high, but potentially two new drying centers.
Export	Delays in polishing coffee and in completing paperwork.	Additional storage costs in Addis Ababa and delays in payment.	Experience and improved relationships with customers, banks and shipping companies over time should improve this.

Table 3: *Production, Purchasing and Export Challenges (Freeman & Hesselden, 2015)*

Freeman and Hesselden (2015:4) describe these challenges as "teething problems", correctable with little effort and cost. Nevertheless, there are a number of other remaining issues. The project shifts critical tenure and user rights to the local communities, however, they rely to some degree on the goodwill of the state and change regularly. Moreover, the agreements in their current form fail to mandate monetary

compensation if forest is lost due to actions of the government itself (Wood et al., 2019). Still, community rights have improved through the use of communal land certification regulations, which provide legal backing and rights to compensation for forest loss (Lemenih & Wood, 2013). While user and tenure rights are a sufficient benefit to take part in PFM, more tangible economic and community benefits might be necessary to ensure the long-term viability of the project, especially as this approach requires much time investment from the community (FAO, 2016; Wood et al., 2019). Another challenge has been the distribution of economic benefits. Trade with forest products has significantly increased, however, most profits occurred to elite groups. Therefore, community cooperatives and small local businesses need to receive more support (Wood et al., 2019). Co-ops must also increase their operating capital and track record to obtain bank loans, and acquire the trust of their members to supply coffee on credit (Freeman & Hesselden, 2015).

Case Study II: Community-Based Ecotourism in Chambok (CBET)

Description

Geographic Context

Cambodia is located in Southeast Asia in the southern part of Indochina (Toko, 2016). In 2019, the country hosted a population of 15 million people, 84% of which live in rural areas and almost 18% below the poverty line (UN DESA, 2019a; World Bank, 2021b; ADB, 2021). Cambodia's recent history is shaped by a brutal civil war, lasting from 1967 until 1975, during which the country's economic and social infrastructure were in large parts destroyed (Moern et al., 2008). Natural resources are a vital asset for the rural population in Cambodia (Toko, 2019). 94% of families are actively extracting goods from the forest: cutting timber, hunting wildlife, producing charcoal and fuelwood, and collecting other NTFPs (Moern et al., 2008). However, forest areas face ongoing threats and deforestation has risen dramatically since the 1970s; while forests spanned 73% of the land before the 1970s, they were reduced to 40% by 1992 (Dennis & Woodsworth, 1992).

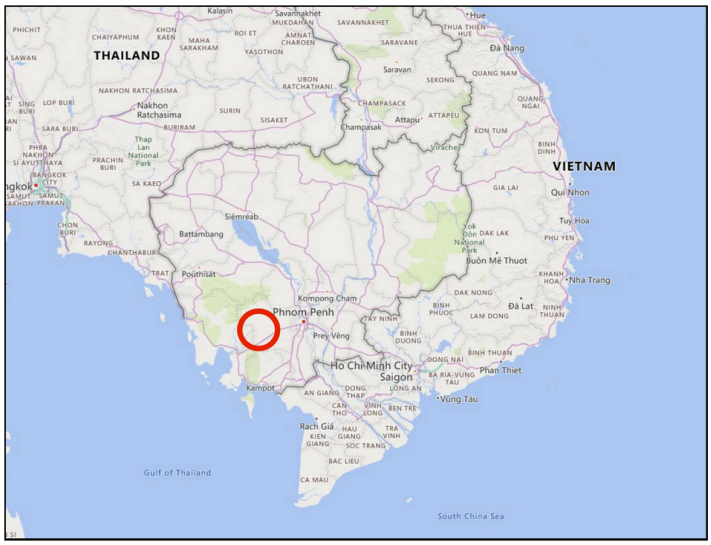
Community-based Ecotourism in Cambodia

Tourism constitutes a vital share of Cambodia's economy, contributing about 11.5% to the country's GDP, and sustaining more than 782,500 jobs (12.4% of total employment) (WTTC, 2013). CBET was initiated by the government together with international donors, including the Asian Development Bank and United Nations World Tourism Organization, with the expectation that ecotourism could enhance community-based conservation and support rural development (Toko, 2019; 2016). Ten years after its introduction, there are 56 ecotourism sites in Cambodia (Rann, 2013). Together with community-protected areas and community forestry sites, CBET forms a system of decentralised forest management.

Project Site and Stakeholders

The Chambok ecotourism site is located in Chambok Commune, Phnom Sruoch District, in Cambodia's Kampong Speu Province (*see Map 2,* Toko, 2016). About half of the area spans into Kirirom National Park, a remote rainforest area (Moern et al., 2008). Arable lands are limited in the region and many households traditionally rely on charcoal making for their income. The CBET was established in 2002 by Mlup Baitong (MB), a local non-governmental environmental organization, targeting around 3,500 residents in four villages (Lonn et al., 2018). The project is mainly funded by foreign donors including

Oxfam Great Britain, the Asian Development Bank, and the UNDP/Economic Commission (Moern et al., 2008). At the government level, different institutions are involved, such as the Provincial Department of Tourism, the Provincial Department of Environment, and Kirirom National Park. Additionally, an officer from the Ministry of Environment (MoE) was deployed to manage communications between the ministry and the CBET. However, there were no direct financial contributions from the Cambodian government (Moern et al., 2008).



Map 2: *Approximate location of Chambok CBET (circled red; ODC, 2021)*

Analysis

Goals

The project aims to empower local communities to actively participate in the sustainable management of forest resources to reduce poverty and improve livelihoods (Moern et al., 2008). To achieve this goal, four central objectives were developed: 1) protect forests and natural resources, 2) provide alternative income sources to forest products, 3) educate communities about the importance of the forests, and 4) build capacity and strengthen community unity (Moern et al., 2008; Toko, 2016).

Engagement and Implementation

The implementation of the CBET was envisioned in three main phases. During phase one: 'Project Establishment' (2002) MB would mobilize resources, summon experts, and raise awareness among relevant stakeholders. In the second phase, titled 'Project Improvement' (2003-2006), infrastructure was to be constructed, in addition to marketing, tourism services, and capacity building. Finally, during 'Project Graduation' (2007-2009), management responsibilities were to be transferred to the community

(Moern et al., 2008). In practice, the first step was for the commune development council to sign a contract with the MoE in 2002. This allowed the communities to use 392 ha of the National Park for a community forestry program, part of which were 70 ha for ecotourism development (Prachvuthy, 2006). Communities organized themselves for the construction of facilities, and were given meals in return by MB (Moern et al., 2008). In the following, the organisation structured the project into different parts, to divide management responsibilities, improve implementation, and allow for transparent monitoring (*see Table 4,* Moern et al., 2008).

Sector	**Action**
Construction and renovation of infrastructure and facilities	● Development of forest trails, ticket-sales booth, rest shelters, information centre, nursery, ox-carts, toilets, homestays, restaurant, parking lot
Capacity building for committee members and service providers	● Knowledge on environmental and project planning, implementation and management ● Trips for committee members to other ecotourism sites
Marketing of enterprises	● Participation in the Cambodian Community Based Ecotourism Network ● Collaboration with tour operators
Maintaining the site environmentally friendly	● Guidelines for waste management ● Forest patrols
Women's Associations	● Support in formation and creation of small enterprises

Table 4: *Chambok CBET project sectors (Moern et al., 2008)*

Several activities and services were developed, including homestays, a restaurant, forest trails to a 30m waterfall, ox-cart rides, souvenir shops and bicycle renting (Prachvuthy, 2006). To allow for democratic community management of these activities, the Chambok CBET committee was set up. This institution is composed of one leader elected from each village and one community leader elected from all of them for a term of three years (Toko, 2019; Prachvuthy, 2006). Three seats were reserved for women. Following the first committee elections, goals and objectives for the site were defined and rules and regulations drafted (Moern et al., 2008). The latter included regulations of committee members' wages, but also a ban on driving cars on the trails, and the composition of a forest patrol group. In addition, the amount of timber and NTFPs villagers could extract from the forest was strictly regulated, and the production of charcoal was completely banned (Toko, 2019).

With this set of rules, the ecotourism site opened in 2003 (Lonn et al., 2019). Income occurring from the different tourist activities is directly held by the committee, and distributed according to a benefit sharing

system (*see Figure 2,* Toko, 2019). The largest share is spent on committee staff wages, while 20% are saved for infrastructure development, forest conversation and aid for poorer families (Lonn et al., 2019). To ensure the sustainability of the project, MB provided a number of technical inputs. These included training on environmental issues, tourism service techniques, project implementation and management. Moreover, villagers were taught about community-based ecotourism concepts, accounting, bookkeeping, hygiene and sanitation, first aid, tour guiding, English and computer skills. In addition, the development of the project was closely monitored, through monthly programme meetings, as well as regular activity and progress reports for sponsors. During the development of the site, progress was also assessed by an external group of evaluators on a three year basis (Moern et al., 2008).

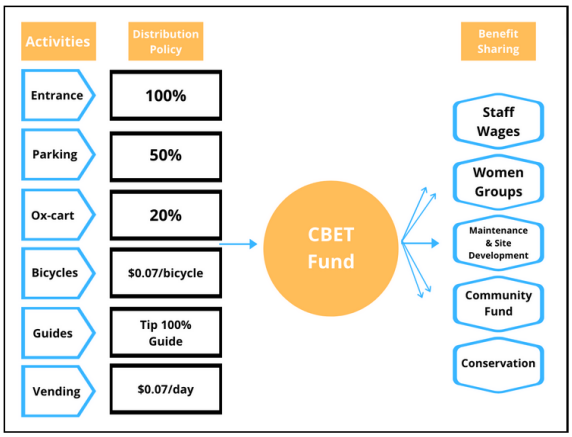


Figure 2: *Benefit sharing system at Chambok CBET (adapted from Toko, 2019)*

Conservation Outcomes

Studies by Moeun et al. (2008) and Pichidara (2013) both attest that the established forest patrols effectively prevented illegal logging, forest fires and hunting inside the conservation area. Forest crime significantly declined since 2003, and wildlife trade disappeared almost completely (Toko, 2019). Many community members involved in illegal logging or hunting prior to the project became farmers or joined the forest patrol group (Moern et al., 2008). Some villagers are active in the patrols without any payment, driven by the cause itself after learning about the importance of the forest (Toko, 2016). Other factors contributing to forest conservation were the ban on charcoal production, as well as the community forestry scheme providing sustainably harvested firewood (*see Figure 3;* Toko 2016). In consequence, forests inside the CBET zones had a 2.0% lower deforestation rate than outside between 2000 and 2012, and a 0.5% greater recovery. However, the latter finding was not statistically significant at the 0.1 level. While the numbers appear somewhat low compared to other projects, 64% of the community members stated that forest resources ‘increased greatly’ or ‘increased’. 36% said that they ‘decreased’, ‘decreased greatly’ or did not change (Lonn et al., 2019).

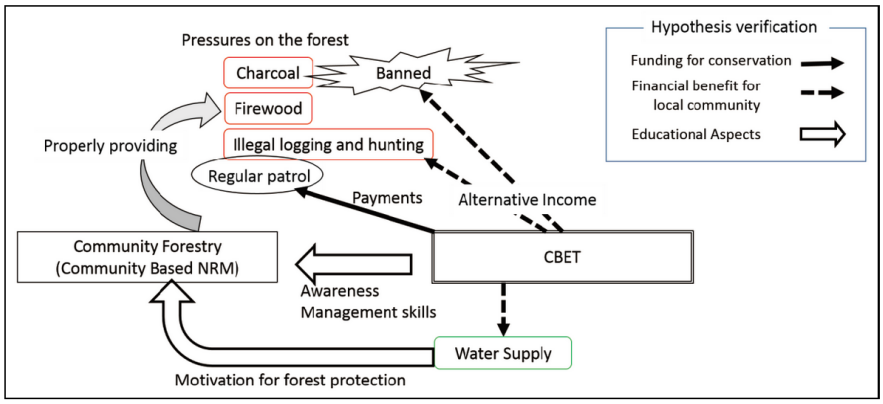


Figure 3: *CBET contributions to natural resource management (Toko, 2016)*

Livelihood Changes

Prior to the project, 94% of households actively extracted forest products such as fuelwood and charcoal, rattan, and bamboo shoots (MB, 2003). With the ban of charcoal and strict regulations on other extraction activities, the income from charcoal and firewood production decreased from 18% to 2%. The second most important income source remained NTFPs, and although similar amounts are being extracted, the process of extraction is now regulated by a set of clear rules. At the same time, agriculture increased as an income source (30% to 49%) (*see Figure 4,* Toko, 2019).

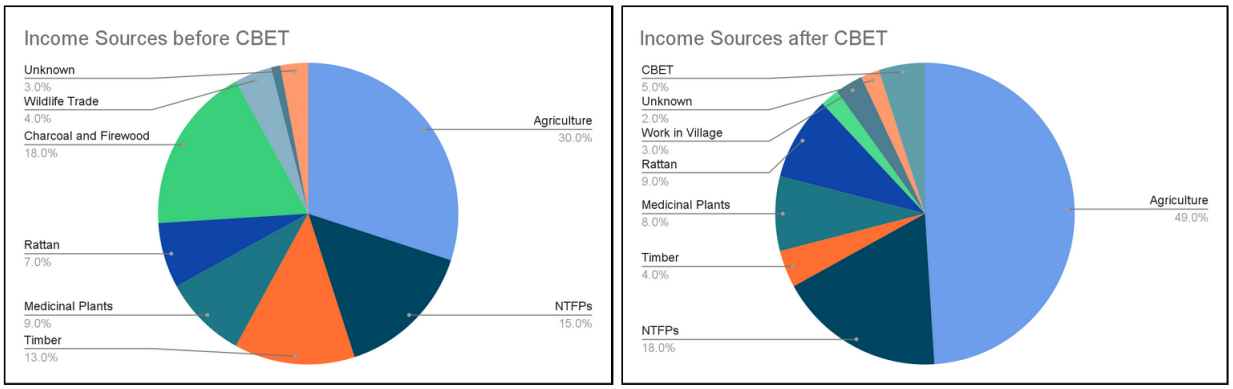


Figure 4: *Income sources before and after CBET (adapted from Toko, 2019)*

The number of visiting tourists did not increase much in the first years of the project, but a small increase in foreign tourists brought in a substantial amount of US dollars (*see Figure 5,* Toko, 2016). This rise was likely due to promotional strategies, including television and magazine campaigns, as well as collaborations with travel agencies in Phnom Penh (Prachvuthy, 2006). Ecotourism activities have employed 300 people on a rotational basis, and the emigration of the community's young population notably decreased (Moern et al., 2008).

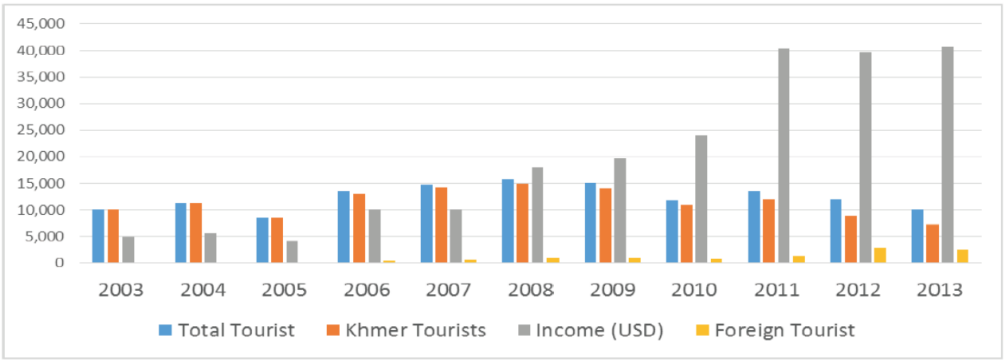


Figure 5: *Tourist numbers and income (USD) in Chambok CBET (Toko, 2016, adapted from Steck, 2013)*

Tourism became a major income source for some villagers (5%), but the median additional income from CBET was only 1.22 USD/month (Lonn et al., 2018; Toko, 2019). Benefits occurred mainly to committee members, tour guides, and members of the Women's Associations, but overall, tourism income remained far behind firewood and charcoal trading (US$26/yr vs US$200-500/yr) (Prachvuthy, 2006). The distribution of tourism income proved quite unequal, expressed in a Gini Coefficient of 0.5, which could be due to some locals lacking knowledge and skills to run tourism enterprises and services effectively (Prachvuthy, 2006). Looking at the communities' perception of livelihood changes, large shifts after the establishment of the CBET project are noticeable. However, these shifts do not appear to be directly related to the project. Only 2% of respondents felt that ecotourism was the reason for their livelihood improvement (Lonn et al., 2018). The primary perceived reason for improved livelihoods of both project and non-project members in the region changed from agriculture and forestry to formal employment. This mirrors Cambodia's greater socio-economic development, which has resulted in the creation of many jobs (Clements & Milner-Gulland, 2014). However, communities inside and outside the CBET area brought forth different reasons for degraded livelihoods. CBET members mentioned agricultural failure most often, while resource scarcity troubled those outside the area. This scarcity might be due to the restricted access to conservation areas for individuals not involved in the project. While ecotourism's direct contributions to livelihoods were small, indirect rewards such as employment generation and greater conservation knowledge are expected to occur (Lonn et al., 2018).

Enabling Factors

A number of factors can be identified which were beneficial to the project outcomes. In this case, the transfer of forest management rights was essential, as land concessions are one of the biggest threats to CBET in Cambodia. Official licences can protect the communities from such sudden land losses and strengthen their ability to develop long-term plans (Toko, 2016). The community management committee and its comprehensive set of rules and regulations create a steady institutional framework, and good

cooperation was established with the respective government authorities (Moern et al., 2008). Throughout the project, MB thoroughly communicated with locals, focusing on awareness-raising and capacity building (MB, 2003). The measured intentions of forest conservation are attributed to these actions. Moreover, 81% of villagers said their perception of forests shifted after CBET had been introduced, almost half of them linked this to the environmental education they had received (Toko, 2019). Other enabling factors identified include the detailed and transparent benefit sharing system, as well as the potential of community participation and cooperation to avoid internal conflict (Moern et al., 2008).

Challenges

While the CBET has yielded some favourable results, a number of problems remain constraining conservation and development outcomes. From the beginning, it was difficult for MB to convince villagers and local authorities to adopt the new approaches and processes. Awareness of the importance of biodiversity remains limited and forest loss, while diminished, is an ongoing problem (Moern et al., 2008; Lonn et al, 2019). Illegal logging has in some parts continued, and forest fires occur almost yearly. Forest patrols aime to reduce the number of fires and raise awareness, but communities are lacking technical and financial resources (Lonn et al, 2019). It has proved especially difficult to protect the forest around the project site from illegal cutting (Moern et al., 2008). Another challenge is posed by community members' limited educational background. Since the beginning of the CBET, one person has led the management committee who is believed to be the only member with sufficient knowledge to do so. This has resulted in an overreliance on his contribution, and MB is actively seeking to capacitate others to take on his responsibilities (Moern et al., 2008). Finally, ecotourism remains a niche market with small growth numbers. While visitor numbers to Chambok have been slowly increasing, the key challenge remains to increase the site's tourism potential to generate higher benefits (Prachvuthy, 2006).

DISCUSSION

Success of Community Engagement

The goals of the WCC-PFM project in Ethiopia and the CBET project in Cambodia are fairly similar. Both aim to establish practices that improve rural development and contribute to forest preservation, through sustainable management and use practices, and both projects adopt a community-based approach. However, their respective steps for engaging communities differ in some regards. In Ethiopia, project planners engaged in participatory learning, and communities were actively involved in the development of a regional forest policy. The development of this policy recognizing community rights matches the importance of the extent of rights developed outlined in the literature (Charnley & Poe, 2007; Ribot et al., 2010; Amaha et al., 2013). Substantial time was invested in capacity building, and throughout the process, the project team aimed to fill a facilitating role, allowing communities to develop and lead activities themselves. It is noteworthy, however, that no evaluation is available on whether this local leadership was in fact achieved. Nevertheless, the approach demonstrates a clear departure from the centralized strategies adopted by past Ethiopian governments. In many cases these did not match local perceptions of access rights to foress, and disregarded communities' traditional knowledge and institutions for forest management (Gobeze et al., 2009). It is striking that none of the WCC-PFM project reports mention problems arising from the side of the government, as this has been the case for other projects in the region (*see* Gobeze et al., 2009)

Engagement in Chambok started with awareness raising by MB about the importance of forests, and was later expressed through the establishment of the community committee, as well as continuous capacity building. However, management responsibilities were only fully transferred after seven years. Consequently, a much closer external supervision becomes apparent in Chambok, although, it is noteworthy that the facilitating organisation was a Cambodian one, not involving external stakeholders as in the WCC-PFM. Moreover, it has been reported that a strong sense of community ownership developed, as well as increased confidence in and intention to protect the forest resources (Moern et al., 2008; Toko, 2019). In both cases, the community engagement brought forth a strong sense of ownership, a promising outcome given that a number of authors count it as a central condition for community-based projects to be successful (Charnley & Poe, 2007; Ribot et al., 2010; Amaha et al., 2013).

Conservation and Livelihood Outcomes

In terms of project outcomes, PFM is proving successful in improving forest conditions and reducing deforestation in Ethiopia. The project has shown promising signs of reducing an 'open access' mentality

to the natural forest, a finding that is confirmed by studies of other PFMs in this region, such as by Gobeze et al. (2009) and Takahashi and Todo (2012) (O'Hara, 2013). In Chambok, community members state that the forest patrols have proven to significantly reduce illegal logging, hunting, and forest fires in the conservation area (Toko, 2019). However, Lonn et al. (2019) have measured a deforestation rate that is only 2% lower than in the surrounding areas. Consequently, there is more concrete evidence on positive conservation outcomes of the WCC-PFM. Nevertheless, the divergence in scientific measurements and local perceptions in Chambok raises questions and should be further investigated. Toko (2019) also points to the complex factors driving deforestation, and the ongoing deterioration of forests around Chambok that, despite efforts in community-based conservation, threaten resources and communities (Toko, 2019).

The most notable differences between the two projects emerged in terms of livelihood changes. The WCC-PFM has been described as empowering and economically motivating, backed by the significant increase in household income from wild coffee and honey (Tolera et al., 2015; Lemenih & Hesselden, 2016). Nevertheless, some marginalised families dependent on forest extraction were economically damaged (Lemenih & Hesselden, 2016). The CBET site, on the other hand, has not caused any major changes in the communities' income. The importance of firewood and charcoal decreased, but small-scale agriculture remained the foundation of peoples' livelihoods. Income from tourism was marginal and unequally distributed, despite the project's elaborate sharing system. The unequal distribution of benefits in both cases can be set in relation to Botes and Van Rensburg's (2000) finding that it is often the most vocal and wealthier groups that gain from community-based projects.

Facilitators and Barriers

The main enablers of the PFM project include the long-term and participatory nature of the process; the adherence to the subsidiarity principle, as well as the project's responsiveness to ongoing developments in the region (Wood et al., 2019). Moreover, the quality and accompanying success of the product support the viability of the project. In Chambok, the steady institutional framework of the CBET has been praised, as well as the good cooperation with the local government, and MB's ongoing capacity building. These results strengthen findings of previous studies, such as by Bender and Tekele (2019), and extend them by highlighting the importance of project adjustment to current events and skill-based training. The case study analysis also provides valuable insights into factors that can inhibit the success of community-based conservation and development projects. In both sites, the equal distribution of benefits generated by the project proved difficult, despite sharing systems. This highlights the importance of consulting with all groups present in a community, and ensuring that everyone's needs are met, and their livelihoods, at the least, not made harder. This has happened in both projects through the ban of certain forest extraction

activities, with some households not being involved in the alternative income generating activity. It remains unclear what hindered these individuals from partaking in coffee production or ecotourism, and more research is needed on their perspective on the establishment of the projects. One possible explanation might be the difficulty of defining the boundaries and nature of a 'community' as outlined by Hackel (1999). It might be unrealistic to assume that all individuals living in a certain area strive towards the same goals, forming a homogenous entity that can be served with one type of income generating alternative. Projects establishing a diversity of employment opportunities, for instance, combining sustainable agriculture and ecotourism might be able to involve more individuals. Additionally, both projects struggle with expanding their operations. In Ethiopia these problems relate to production, purchasing and export, but different solutions are readily available (Freeman & Hesselden, 2015). In Cambodia, however, the ecotourism site has struggled from the beginning on to increase tourist numbers. Reasons for this are unclear as of now and can only be speculated about. Generally, Cambodia is mainly known for Siem Reap, not as an ecotourism site. It seems as though not much effort has been put into promoting other sites in the country, and the lack of government funding for this project speaks to this. More support is needed to raise awareness both within Cambodia and abroad, in addition to a number of other steps outlined in the following.

Outlook and Recommendations

Looking at the WCC-PFM, the significant increase in community motivation to protect the forest as well as individual ownership feeling are promising signs that PFM practices will be continued beyond the project's lifetime. The SWFLG also gathered individual perspectives on the achieved outcomes of the project, with one member stating, for instance, "The forest [now] belongs to the community (...). It is after (...) the community took ownership, that they gained the awareness (...) After the handing over, the forest is in much better condition than before." (SWFLG, n.d.:4). The PFM members attribute this development to awareness creation: "inside the forest there are some locations that are open, exposed. In those places, because of the awareness that has been raised, you find that the farmers have planted different types of trees, (...) indigenous trees that will grow large" (SWFLG, n.d.:4). The project team's support for policy development on a national level suggests an expansion of this largely successful approach to other regions (SWFLG, n.d.). Nevertheless, there are still a number of opportunities for further improvement. As outlined above, the future development of the PFM needs to be more inclusive and ensure that no groups are left behind. A promising avenue for this is given by the site's significant potential to diversify the forest products offered, including spices, and tree oils. Such diversification of economic goods also limits trading risks, can compensate for yield losses, and generally enables more locals to be involved in PFM (Freeman & Hesselden, 2015). In addition, there are a number of strategies that have proven successful in

other PFM sites that could be added to the WCC-PFM. In Kafa Forest, for instance, communities were provided with native tree seeds for forest development and improvement, and have planted more than 100,000 trees (Bender & Tekele, 2019).

The Chambok CBET site has been portrayed as the flagship CBET project in Cambodia (Toko, 2016). Between 2006 and 2007, 47 delegations visited the site, including national and international NGOs, students, and researchers (Moern et al., 2008). The project has also received a number of awards, such as the 2013 award for socially responsible tourism, and the Ministry of Tourism has requested MB to implement strategies of the project in other regions (Va et al., 2013; Moern et al., 2008). Since management responsibilities were transferred in 2010, the CBET has been managed independently, with MB acting as an advisor (Toko, 2016; Lonn et al., 2018). Today, the site hosts more than 40 homestays, exhibitions, different hiking trails, craft workshops, cooking classes and more (CETS, n.d.). Nevertheless, there is much room for improvement, as the analysis of the project has revealed. To scale up the income generated from tourism, further capacity building for financial management, English communication, and planning are needed (Moern et al., 2008). Marketing efforts have to be strengthened, possibly including corporations with tour operators in Phnom Penh, and further awareness raising among villagers might help increase participation (Prachvuthy, 2006). Finally, sustainable agriculture and other enterprises should be integrated into the project to ensure stable and higher incomes, fostering impactful development of the rural communities (Moern et al., 2008). For the integration of crop production, but also in efforts to build better links to international markets, the CBET committee could gain from the experiences gathered in Ethiopia, drawing from their knowledge and skills. An international network or database of community-based strategies and outcomes would allow organisations and project teams to build onto each other's work, making sure resources are invested effectively in sustainable projects.

Further Research

In order to draw comprehensive conclusions about the projects' outcomes, and the effectiveness of PFM and ecotourism in combining conservation and development, evidence of their implementation over a longer period is needed (Wood et al., 2019). Both projects are not yet twenty years old, and most assessments only cover time spans of about eight to ten years. In addition, there is a significant lack of research that centers the perception of community members. The finding that locals' assessment of forest improvement in Chambok significantly deviates from data measured by external researchers, for instance, highlights the importance of taking their perspectives into account. Moreover, assessing communities' experience is crucial given the fact that community-based projects are all about following community knowledge and leadership. Despite ecotourism's direct contributions to livelihoods being minimal in

Chambok, indirect benefits such as indirect job creation and greater awareness of forest conservation are likely (Lonn et al., 2018). Such wider reaching outcomes of community-based projects remain widely unacknowledged. Finally, research on community-based projects tends to focus on outcomes generated, rather than the facilitation processes. More critical perspectives are needed, reflecting on questions such as *Whose values are prioritised? What parts are pre-determined? How can we strengthen communities in developing their own solutions?* In both cases analysed, the strategy deployed fosters the integration of remote communities into global market dynamics. It is to be questioned whether this is the only way to improve livelihoods, or if the projects follow an intrinsically Western conception of development.

CONCLUSION

This research has first and foremost revealed that development is complex. Countless initiatives, projects, and policies have been initiated under its umbrella, the analysis of which reveals complicated histories of dependency, but also empowerment (*see* Escobar, 2011; Mansuri & Rao, 2004). Solely defining development poses a challenge, as different groups apply different interpretations. This paper has therefore brought forward a synthesis of these different perspectives, taking sustained livelihood improvement at its core. It has been established that locally-based development initiatives are generally more effective than conventional top-down approaches, as they aim to harness the full extent of a community's skills and resources, benefitting all members, rather than only supporting specific segments (Stöhr, 1980). They also offer much potential for combining development strategies with conservation targets, mutually contributing to each other's success (Garnett et al., 2007; McShane & Wells, 2004).

This paper has established which factors can positively contribute to this combined approach, and what challenges still exist. Despite the different cultural and economic context of the two case studies, a number of common enablers could be identified. Both initiatives clearly respond to perceived threats in the respective communities, achieved through iterative project design process. Moreover, the communities were enabled to create their own institutions, fit to their needs and values, and democratically elected. Representatives and the wider community were supported through sustained capacity building on natural resource, financial, and project management. On the other hand, significant challenges, particularly for the CBET in Cambodia, were identified, including ongoing forest degradation due to a lack in technical and financial resources. The project was not able to generate sufficient revenue, and failed to establish effective links to international markets. The results provide valuable insights for policy-makers and development practitioners, highlighting the importance of sharing experiences through knowledge infrastructures. Both the WCC-PFM and the CBET would benefit from diversifying income generating activities, decreasing their dependence on global market fluctuations. Finally, projects have to pay more attention to ensuring that all community members benefit from the livelihood and conservation outcomes, regardless of their demographic and socioeconomic background. However, there is also a crucial need for more local voices and critical perspectives to be reflected in research.

This research has revealed the wealth of potential in community-based development to advance development practice as a whole, but in particular to tackle multiple sustainable development goals with one project design. Practitioners and policy-makers should focus on how to make use of this potential to

the fullest, in order to foster the resilience of vulnerable communities and ecosystems, and actively counteract the hazards threatening their survival.

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