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Preservation or Diversification? Ideas and Practices Connected with Sustainability in Vanuatu

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Abstract: The aim of this article is to explore anthropology's potential to contribute to reflections on the definition of sustainability. It draws on in-depth ethnographic fieldwork in the South Pacific island state of Vanuatu, using as its main methods semi-structured interviews, participant observation and freelisting. This article presents decisions and acts of the inhabitants of the rural village of Siviri regarding both the cultivation of food crops and fishing. It relates findings to a recent anthropological working definition of 'sustainability' that emphasises facilitating the necessary conditions for change by building and supporting diversity to address the unpredictability of the future. This definition is opposed to other current definitions that stress the preservation of existing norms. The research results presented here show that, with their decidedly future-oriented ideas and practices, the villagers of Siviri engaged with climate change adaptation projects and workshops regarding conservation and subsequently created new cultivation methods and established a marine conservation area. Additionally, they reduced their engagement in cultivation and diversified their livelihood practices. Referring to theoretical approaches connected with the 'ontological turn' in anthropology, it is argued that asking ontological questions reveals fundamental differences between the inhabitants of the village of Siviri and international and national governments and organisations in terms of their conceptualisations connected with sustainability. The article concludes that anthropology can make important contributions to discussions about sustainability that have the potential to improve the dialogue between different stakeholders by showing the alterity of conceptualisations. This may lead to new, localised and contextualised definitions of sustainability.

Keywords: anthropology; agriculture; fishing; marine conservation; climate change; Vanuatu

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1. Introduction

In the Anthropocene, an increasing number of ideas and concepts have become globally relevant—Climate Change, adaptation, biodiversity, conservation and sustainability being prominent examples. In the Global South, the concepts of sustainability and sustainable development, and the ideas related to them, are disseminated largely by development organisations, who plan and implement a wide variety of projects with goals ranging from climate change adaptation to conservation. The concept of sustainability and ideas connected to it are used not only by those organisations, but also by national governments; they are discussed in the development of policies and projects that are then implemented. Hence, communication about the definition of the term 'sustainability' and a liveable future is firmly on the agenda of governments and non-governmental players alike.

The aim of this article is to explore how the examination of 'ontological' questions [1] by anthropology can contribute to deliberations about the definition of sustainability. For this purpose, I apply, as an experiment, such ontological questions to my ethnographic experience and material and then relate it to a (working) definition of 'sustainability' from a recent publication [2].

In order to achieve this, I show what people in the village of Siviri in the Pacific island state of Vanuatu do in terms of lived sustainability. I show that the ideas and

practices in the village are neither a straightforward implementation of policies regarding 'sustainability' found in national legislation and plans nor independent from them. Siviri villagers do not use the concept of sustainability in everyday life; however, definitions and other accounts of sustainability usually explicitly or implicitly refer to a desirable or liveable future. Thus, I concentrate on what people in Siviri do to secure a future they value as desirable and liveable with reference to two related fields as examples, namely the cultivation of food crops and fishing. Note that I do not use the term 'agriculture' to refer to the cultivation practices of people living in my research site of Siviri. The most widespread form of cultivation is horticulture and, more precisely, a form called shifting cultivation where primary or—mostly—secondary forest is cleared by the use of fire. However, some farmers, especially on the main island of Efate, also practise intensive agriculture on a small scale. Asking about what people do to secure their futures provides an important perspective for understanding their actions in the present [3]. This has been emphasised recently by the increasing number of studies in anthropology about the future [4–8]. I show that scrutinising the ways in which people act towards the future, as well as their conceptualisation of the future itself, contributes to improved perspectives on their ideas and actions.

I chose two areas of practice as case studies for my article: cultivation/agriculture and fisheries. They are referred to in the description of Vanuatu's national sustainability plan, for which one of the policy objectives is to: "Increase agricultural and fisheries food production using sustainable practices to ensure sufficient access to affordable and nutritious food" [9] (p. 13). I look at these two areas of practice in the village of Siviri with a focus on answering ontological questions regarding the villagers' conceptualisation of these areas; subsequently, I expand upon the aim of this article mentioned above, namely the examination of how this anthropological approach may contribute to a definition of sustainability.

For that purpose, I use the definition of Marc Brightman and Jerome Lewis. They state:

> "The challenge of sustainability demands much more than the protection or preservation of communities or nature reserves [. . .] Sustainability, from this point of view, might best be understood as the process of facilitating conditions for change by building and supporting diversity—ontological, biological, economic and political diversity". [10] (p. 2)

The focus here is change and diversification, in contrast to governments' and development organisations' prevalent approach of sustainability as resilience [10] (pp. 3, 10). Brightman and Lewis conclude that:

> "the evidence suggests a working definition of sustainability which emphasises that it is a principle based on the active cultivation of cultural, economic, political and ecological plurality, in order to be more likely to address unpredictability in future. At its core, sustainability demands practices that will foster, prize, support, defend and generate diversity at every level". [10] (p. 17)

Other authors of the referenced volume edited by Brightman and Lewis, as well as of other publications, also emphasise the orientation of people's actions towards a liveable life in the future and towards creating a diversity of knowledge and practice—instead of sustaining those that already exist [11–14].

2. Methods

This article is based on 16 months of in-depth ethnographic fieldwork in rural areas in Vanuatu. In this research, the main concerns were to accompany the local people in their everyday life with a focus on work and to experience challenges and environmental changes together with the interlocutors. During the research stay, the following qualitative methods were used: participant observation, practical participation, different forms of interviews—mainly semi-structured interviews [15]—and freelisting [16], as well as numerous informal conversations. During the research period, over 100 formal and informal

interviews were conducted for the project. The topics of these interviews and conversations included several key concepts connected to cultivation, livelihood, fishing and conservation, complemented by subsequent discussions with the interlocutors. Practical participation included participation in cultivation such as clearing, planting, weeding and harvesting, as well as in fishing activities such as fishing with a net or diving. All interviews were conducted in the local language, Bislama (Bislama is a pidgin language and the lingua franca in Vanuatu). A portion of the research for this article was conducted over a period of 15 months of fieldwork between 2016 and 2019 for a project on human–environment relations and climate change. The other portion took place in 2020 for the project SOC-Pacific (See: https://socpacific.net/, 5 January 2022), and there, the focus was on marine conservation and fishing in the village of Siviri (The greater part of this last period of fieldwork was conducted together with Elodie Fache).

3. Theoretical Approach

Within the discipline of anthropology, there is a long tradition of dealing with concepts using a variety of methods. One such approach is the attempt to understand people's ideas and actions 'from within' (the 'emic' perspective), interpreting their concepts and actions, as opposed to analytically from the outside ('etic'). Using concepts that are not the people's own in representations of research results is, however, often criticised and recommended to be avoided if possible—although it is clear that such 'etic' views are inevitable to some extent. Recent perspectives in environmental anthropology have approached conceptualisations and globalised issues in a new way, avoiding dichotomies such as emic and etic and instead investigating such globalisation processes as, for example, travelling ideas [17]; the reception of information [18]; and encounters across difference, characterised by frictions [19], or with the framework of political ontology [20].

I argue that anthropology is generally able to contribute to discussions about defining sustainability because of its capacity to question (its own) concepts and that asking ontological questions is especially well suited to re-conceptualising the researcher's own concepts according to ethnographic experiences [1] (pp. 14–15). Recent 'ontological' approaches in anthropology claim that researchers should ask *what* people are doing—thus dealing with conceptualisations [1] (p. 16)—before asking *why* they are doing it.

In this article, I draw on ontological approaches that look at (re-)conceptualisations of concepts and the (re-)creation of worlds in various locations and contexts. I use the concept of 'world' to indicate that I do not deal with knowledge about natural entities that exist independently of humans but with the possibility of a plurality of worlds [21]. Different worlds—e.g., those of anthropologists and 'ethnographic subjects'—thus differ "rather in the ways in which either of them may come to define what may count as a world, along with its various constituents" [22] (p. 470). Consequently, I deal with the question of "what kinds of worlds are there and how they come into being" [20] (p. 11), and I show how people in Siviri create and re-create their world by engaging with their environment. I use the concept of 'environment' in this article in a very broad sense in order to avoid specific ontological distinctions between, for example, human versus nature. It may include artefacts, discourses, practices or social relations [23] (p. 9). I am especially attentive to the suggestion that people in Siviri conceptualise the environment not as a separate physical sphere but equally as social and other-than-human [24].

4. Research Site

Vanuatu, an island state in the South Pacific, is geographically part of Oceania. The 83 islands of the archipelago stretch over an area of 12,190 km^2 [25] (p. 162). In an international context, Vanuatu is classified as a Small Island Developing State (SIDS) and is accordingly regarded as highly vulnerable to climate change [26] (p. 3). Reports and prognoses show multiple challenges for Vanuatu: the country is extremely vulnerable to natural hazards such as hurricanes, floods, earthquakes, landslides, tsunamis and so on [27] (p. 32). It is likely that climate change and the related increase in extreme weather

events will mean additional stress for cultivation [27] (p. 39). This means that people in rural areas, in particular, will have to deal with problems cultivating their crops because of augmented temperatures, more frequent dry periods and higher variability of rainfall, the intrusion of salt water, erosion, hurricanes and other phenomena in connection with climate change. It is expected that these effects will have negative impacts on the cultivation of food crops and that water management will become more difficult and more crucial [27] (p. 50). Water shortages and the loss of planting material are two of the key problems mentioned in studies of farmers across Oceania [28].

As a result, a great number of projects for climate change adaptation have been, and are being, carried out in Vanuatu, targeting challenges in the cultivation of food crops. Government and other organisations have designed measures for food security and climate change adaptation in recent years, mostly focusing on rural communities. These projects have been realised and financed almost exclusively by foreign organisations that largely cooperate with Vanuatu state institutions such as the forestry or agriculture ministries. Measures are implemented by members of both national and international organisations. A number of these projects aim to improve and support 'family farming' in rural areas for subsistence and the market.

The village of Siviri is located on Vanuatu's main island of Efate, a volcanic island with upraised tertiary limestone [29]. Its climate is characterised by high rainfall, but there is a great variation in precipitation among different places on the island [30]. Siviri lies some 40 kilometres from the capital, Port Vila, and villagers have easy access to this urban centre since the village is located close to the main sealed road that circles the island. The transport of goods and people to the capital and to some of their more distant gardens is unproblematic. In many families, at least one person works in Port Vila or in another part of the island, often in the education, service or construction sectors.

The approximately 300 inhabitants of Siviri have a long tradition of combining the cultivation of food crops with fishing, providing both for their own consumption and for monetary income when they sell the surplus at the market. Cultivation provides not only important crops for the daily food supply but also the most important crop, the yam, which is an essential part of ceremonies. In 2019, the village consisted of 53 households (one household being a group of people who share one kitchen house). In one household, usually two or three generations live together in several houses; they share one kitchen and thus manage everyday life together. These households also include, for example, young men and women who work in the capital or in other places around the island. Students who live in boarding schools during the school term join the household during the holidays. Although there are several sub-chiefs and a chief in the village, the community is relatively egalitarian. As usual in many Melanesian communities, kinship relations and relations created and maintained by reciprocity are pivotal.

Inhabitants of Siviri practise cultivation in the form of horticulture, using a method that is often referred to as 'shifting cultivation'. For example, when planting yam, they clear secondary or primary forest annually, using bush knives and fire to create a new garden. After the harvest of the yam, they often plant other crops in this garden for several years before they leave it fallow for a further few years. Although this praxis is changing, currently every family member still has access to crops from the individual or family gardens. Over the past few years, people have either moved their gardens closer to their houses or at least installed an additional garden next to their kitchens. During my stay in 2017, many families grew vegetables and aelan kabij (abelmoschus manihot) next to their houses. Although nearly every family had a garden, a considerable part of the average family's food supply was bought from markets or shops in Port Vila and at small road markets. The cash economy and wage labour have become key factors in people's lives over at least the past decade, and people I spoke to said that they now have less time for gardening. However, being able to grow one's own food is essential and acts as insurance for ni-Vanuatu, the people of Vanuatu.

In contrast to root crops, which are regarded as the most important staple food, the inhabitants of Siviri explained that they see fishing rather as an additional healthy source of food or income. Fishing is an activity that differs in some important ways from other methods of acquiring food, especially from the cultivation of food crops. However, it also resembles the latter in some respects. When they practice cultivation, it is necessary for humans to prepare the ground, plant and weed, whereas fish are already there for the taking: "you just have to go and catch them", as one interlocutor explained.

However, the growth in population since independence in 1980 has led to increasing concerns in Vanuatu about overfishing [31]. Johannes mentions reports from a number of villages that certain species of fish (mullet, pico and manguru) substantially decreased in the decades before the turn of the millennium and that this was attributed to "heavy fishing pressure" [32] (p. 12). Consistent with this, interlocutors from Siviri told me that fish stocks declined during the 1990s. At the same time, the national government began to promote marine conservation measures, while NGOs conducted workshops and awareness events that informed about the concept of conservation [33].

The inhabitants of Siviri successfully manage to provide themselves not only with food but also with other goods they desire, such as mobile phones or cars. Although the people of Siviri stated that they consider the cultivation of food crops and fishing as important for the present and the future, over the past few decades, they have also expanded their activities for making their living to other areas, such as wage labour, selling firewood or other activities to gain monetary income [24]. This raises the question for the people of Siviri, and also within the context of national policy, of what people expect in order to secure their future lives.

5. Sustainability in Vanuatu: Resilience and the Preservation of Resources?

In the national context, the government of Vanuatu published, in 2016, important policies regarding sustainability as the 'National Sustainable Development Plan', named 'Vanuatu 2030—the People's Plan'. Although it is not explicitly stated, this plan clearly refers to the Sustainable Development Goals of the United Nations (UN). Most aspects of the UN's 17 goals are addressed in this national plan. The explications about sustainability in the plan are in accordance with the statement by Brightman and Lewis that governments worldwide increasingly approach sustainability in terms of resilience [10] (p. 3). In line with this, 'sustainable' is defined in Vanuatu's national development plan as the quality of being "able to be maintained at a certain rate or level [not adversely impact on future generations or our environment]" and the further explanation of 'sustainable' says that it refers "especially to ensuring resilience and the effective long-term management of our natural, financial and human resources" [9] (p. 2). Although the plan says that the goal is to "positively transform our country"—which indicates the intention to promote major changes—there is a strong focus on "stability in politics, policy and the economy" [9] (p. 3) and thus on maintaining existing resources. One of the development aspirations is: "Maintaining a pristine natural environment on land and at sea that serves our food, cultural, economic and ecological needs; [. . .] enhanced resilience and adaptive capacity to climate change and natural disasters" [9] (p. 4).

Thus, when the plan addresses sustainability, the major foci are stability, maintenance, resilience and resources; even the goal of maintaining a pristine natural environment is ultimately a goal that secures resources. These notions of sustainability are relevant for the relatively high number of workshops and projects conducted by NGOs and government departments in various locations across Vanuatu that are related to the topics of climate change adaptation, conservation and food security. The focus of such workshops and projects is to preserve the existing, including cultivation for the family's or the village's consumption and selling the surplus at the market, and also preserving the diversity of species.

6. Sustainable Cultivation in Siviri?

In the following section, I look at the ideas and practices of Siviri villagers regarding resilience, stability and the maintenance of practices emphasised in the national sustainable development plan, but also at the ideas and practices of diversification and change emphasised in the working definition delineated above.

Women and men in Siviri explained to me that the everyday cultivation of food crops is not only important for their present but also for their and their children's future. They do not want to depend on a job that they could easily lose, nor do they want that for their children. One older man in Siviri underlined it as follows: "If you have a job in town it is good, but still you have to have your garden, so that you do not depend on the food in the stores" (All citations of interlocutors in this article are translated from Bislama to English by the author). Another interlocutor stressed that even if you have a good job in Port Vila, it may be that you are fired or that, when you reach a certain age, you retire. In both cases, he explained, "if you come back to the village and you do not know how to cultivate [food crops], you have a big problem [. . .] but if you know how to do it, you know how to survive". Because of this, they think it is important that their children learn how to cultivate the land. In this section, I look at what people do that relates to this statement and I sketch out the most important characteristics of cultivation for Siviri villagers as well as some alternatives to secure their livelihood.

Today, the people of Siviri plant different kinds of crops in various kinds of gardens scattered around the village. They categorise their gardens depending on the location and the kind of crops they plant. According to my interlocutors, the most important is the garden for yam. The first harvest of yam is celebrated in Siviri on Chiefs' Day in March, and with it begins the time for marriage ceremonies, in which yam is the most important part of the ceremonial exchange. Other gardens are for manioc (cassava), taro, sweet potato, banana, peanuts, corn and sugarcane, etc. These gardens are usually family gardens, where children sometimes have small plots for themselves. In the vegetable gardens, aelan kabij (abelmoschus manihot), tomato, different cabbage varieties and capsicum can be found. Often women take care of these gardens. Despite the designation of 'yam garden', 'manioc garden', etc., most of those areas are, in fact, mixed-crop gardens where different kinds of crops are cultivated. Siviri villagers usually walk or drive regularly, every two or three days or at least on Saturdays, to their gardens to undertake clearing, planting, weeding or harvesting. The distances from dwelling houses to gardens differ considerably: while some gardens are next to the owners' houses or within a short walking distance, others are located at a considerable distance so that people have to walk for more than an hour or use cars in order to reach them.

In Siviri, various food security and climate change adaptation workshops and projects have taken place during the past 10 years. A great number of these projects took place under the heading of 'food security' and aimed to introduce new and change existing cultivation methods and techniques. Some inhabitants have also participated in training at the Department of Agriculture in the capital Port Vila. During one long-term project, which took place in Siviri and some neighbouring villages, a number of workshops and awareness events took place. The main aims were the improvement of food security in combination with climate change adaptation. In particular, between 2012 and 2015, participants attended workshops every two or three months. They were provided with information based mainly on scientific models and explanations of climate change as well as cultivation methods and techniques in combination with practical implementation. The staff of the project aimed to introduce improved techniques and methods in order to secure the supply of food through villagers' own gardens and, preferably, producing enough that they could sell the surplus at market. Additionally, it was intended that "[s]mall scale farmers [. . .] have access to knowledge on improved integrated, intensive, organic gardening methods" [34]. Other workshops that took place in Siviri had similar intentions, with a similar goal of food security.

One specific change in methods, particularly propagated by the agriculture department, was to avoid the burning of vegetation that currently forms an important part of the method of shifting cultivation prevalent in Siviri and many other parts of Vanuatu [35,36]. A staff member of the department, who was also involved in the long-term project mentioned above, explained to me that burning dries out the soil and destroys dry vegetation that could otherwise be used for mulching. As a result, he was convinced that people had to learn to not burn vegetation. Instead of clearing new pieces of land every year, his suggestion was that they should cultivate plants that supply the soil with nutrients so that no fallow period needs to be observed and the same piece of land can be cultivated continuously.

Siviri villagers were generally interested in the projects, and a number of them participated in the workshops. According to my interlocutors, they highly appreciated becoming acquainted with new methods for agriculture. In their view, this knowledge might indeed become relevant in the future if weather or other conditions were to change. Some villagers actually tried out some of the new methods. However, to the surprise of project managers, many participants, after showing enthusiasm at first, did not go on to implement most of the new methods and techniques.

The statements and practices of men and women in Siviri revealed that, during the last few decades, they did not concentrate on gardening alone for their livelihood. In addition to using a few of the practices for maintaining food security presented during workshops and training sessions, they combined cultivation with various other options. This means that they not only drew on suggestions made during these events but also chose various (other) ways to make a living. A male inhabitant of Siviri explained: "You have to do different things. You cannot just do one thing or stay at home. Man Vanuatu has to move". This means that it is fundamental for the people of Vanuatu not only to move between different places where they, for example, have planted different gardens, but also, in a wider sense, to engage in different activities in different places and contexts in order to make a living as well as, for example, for ritual purposes.

In the following section, I sketch out activities regarding cultivation and livelihood practices that took place after the crucial event of Tropical Cyclone Pam in 2015 until recent events in 2020. In March 2015, Cyclone Pam caused severe damage to houses and gardens in the village [37,38]. The villagers rebuilt their houses quickly and were also able to replant a number of their gardens shortly after the cyclone. However, more serious difficulties only became clear months after the cyclone [39]. Many of my interlocutors stated that although they planted considerable numbers of food plants during the months after the cyclone, the yield was significantly lower than in previous years. They explained that the cyclone was followed by a long drought, which some called "El Nino", that made the re-cultivation of food crops very difficult; this was a greater problem in the long term than the cyclone itself. In order to make a living, my interlocutors told me that in many households, members combined several livelihood practices, most simultaneously. With a few exceptions, they continued planting food crops, but mostly to a considerably lesser extent than before the cyclone, and in a number of cases in different places using different techniques. Several people who continued commercial or subsistence planting used some of the techniques that were presented during adaptation workshops. During my work in Siviri, I observed villagers gardening next to their houses, and conversations revealed that people had reduced the number of gardens in areas more distant from their houses. Some even shifted their planting activities completely to their home gardens.

In addition to cultivating food crops, villagers engaged in various forms of wage labour. Interlocutors also stated that the cutting of firewood, which can be sold at the market in Port Vila, increased considerably in Siviri. They also pointed out that the cutting and selling of fence posts and timber increased. Some of the inhabitants of Siviri continued to make use of other possibilities, for example, the commercial breeding of pigs and fowl or fishing. Good opportunities exist to sell pigs or fish to hotels or in the markets in Port Vila and elsewhere, or informally locally. Recently, a number of women in the village

began to engage in producing pieces of handicraft to sell at the recently built handicraft market in Port Vila. Others engaged in the planting of precious woods such as mahogany or sandalwood; often, this does not provide an income for themselves but benefits their children in the future. Most of the villagers combine two or more options in order to make a living.

The importance of cultivation for Siviri villagers, as stated at the beginning of this section, thus remained in spite of decisions to diversify livelihood practices. Villagers assured me that it is important that their children learn how to cultivate the land and explained various reasons for its importance. One pragmatic reason specified was that cultivation enables everyone to make his or her living without being dependent on wage labour, as the citations of interlocutors at the beginning of this section exemplify.

Another reason for the importance of cultivation is that crops are important for ceremonial exchange. While yam in Siviri is especially important for exchange in marriage ceremonies, there are other occasions on which it is important to give yam. One of my interlocutors mentioned the ceremony for the harvest of the first yam; this is celebrated in Siviri together with Chiefs' Day, a public holiday when ni-Vanuatu celebrate the so-called traditional chiefly system and its representatives [40]. The inhabitants of Siviri who have no gardens cannot contribute yam to this ceremony and thus cannot join the collective celebration and are thus not fully part of the community. Accordingly, only very few inhabitants of Siviri have no garden at all. During a conversation with one of these non-gardening villagers, he told me that he does think about starting to cultivate in order to be able to contribute to the community. Another interlocutor even pointedly remarked that if you have no garden [in Vanuatu], you are not a human being.

My ethnographic work with Siviri villagers revealed the cultivation of food crops as a practice that forms an inseparable part of their present and future worlds. More precisely, it showed that by continuously engaging with their environment, including during times of crisis such as Cyclone Pam [41], they create and re-create their reality or world. Cultivation, and also experimenting with new cultivation methods and with new ways of making a living, are thus important ways of engaging with and relating to their environment.

7. Sustainable Fishing?

People in Siviri explained to me that fish and fishing are important for future generations and that future generations will benefit from being able to live in the same environment as people of today, have the same knowledge and obtain healthy food. In this section, I present people's actions relating to this statement.

Siviri villagers learn in childhood how to go fishing and how to collect shellfish. Growing up, many adults practise these activities regularly in order to supply their families with additional food. Female villagers collect shellfish on the reef or go fishing with a line, whereas men frequently use different kinds of nets for fishing. Many men also go diving and use spear guns to catch fish, either during the day or at night. Especially for young men, this is a popular activity.

The frequency of fishing or collecting shellfish depends mainly on the villagers' individual preferences. Some of my interlocutors told me that they go fishing every two or three days, whereas others explained that they only go two or three times per month. Fishing and collecting shellfish are popular leisure activities at the weekend; for example, when families have a picnic, every member is busy with fishing or collecting shellfish, which are afterwards roasted and eaten. Fishing may also be used to generate monetary income. Several of my interlocutors explained that fish act as a tourist attraction because tourists sometimes visit Siviri in order to snorkel in the lagoon.

All my interlocutors emphasised that they enjoyed having fish as food and told me about individual taste preferences. When the men come home from spear-fishing late at night, they often roast and eat a part of the catch immediately. Fish is not only 'food'; it is 'healthy food' and can even be used as medicine. However, my interlocutors never spoke of

fish or shellfish as an important staple food but rather described it as a healthy supplement to other food such as root crops or processed food such as rice.

Although it plays a relatively minor role in terms of food security in Siviri, my interlocutors stressed that it is important to secure the existence of fish for the future. Inspired by the workshops and awareness events mentioned above, the villagers decided on their own initiative to establish a community-managed marine conservation area in the 1990s. My interlocutors explained to me that, at that time, they introduced conservation as a new instrument for increasing the overall number of fish and preserving species of fish and shellfish for the future. The conservation area is seen as a "backstore" to supply other areas, as several interlocutors explained. They also emphasised that it was important to them that their children encounter the same realities in the future as exist today. Conservation means that the "next generation can still enjoy the same as you today", explained an inhabitant of Siviri in his thirties. Others referred to future generations benefiting from the option of healthy food and knowing and living in the same environment as people of today. One woman phrased it as follows: "when there is a conservation area, there will be many fish, trees and animals for the children in the future".

Aiming for continuity by creating a marine conservation area in Siviri can be interpreted as analogous to aiming for continuity regarding cultivation: my ethnographic results show that fish and fishing are important parts of the present world of the people—and of their future. This is similar to the field of cultivation, where ni-Vanuatu are enthusiastic about learning and creative in introducing new methods [39]: with the introduction of a conservation area, people have created the means to maintain the possibility of continuing with fishing in the future and, more generally, to maintain the relationships between people and fish [42]. This means that through the introduction of marine conservation, Siviri villagers creatively secured the future of the specific assemblage of humans and fish/shellfish that they created as a novel concept and practice [42].

8. Discussion

The activities of the Siviri villagers in connection with the two cases studied, cultivation and fishing practices, reveal assumptions and practices that are firmly aimed towards the future. In connection with both areas of practice, people in Siviri are engaged in globalised sustainability practices through their involvement in workshops and projects. Before I discuss the aim of this article, namely analysing how anthropological research can contribute to discussions about the concept of sustainability, I summarise possible answers to the ontological questions of what people do when they practise cultivation and fishing—or what cultivation and fishing *is* for them.

When they cultivate the land, Siviri villagers engage with the soil, the planting material, the roads and paths to and between their gardens, and the vegetation. By cultivating, they produce food for consumption, but they also make sociality and create their landscape by moving to and between their gardens. When they participate in workshops, they take advantage of the opportunity to familiarise themselves with new ideas and practices, and they use these ideas and practices as they see fit in order to create new ways of cultivation. With all these activities, I argue, they create and re-create their world. When they fish, Siviri villagers similarly 'produce' food, make sociality and create their landscape, thus maintaining their world. Here too, they have decided to change their practices by relocating their fishing to other areas and by prohibiting fishing in the conservation area.

Siviri villagers thus acted in both cases in a very flexible manner and changed their own practices and thus their way of life in order to preserve what they regarded as important for their and their children's futures: namely, to be able to continue practising cultivation and fishing.

At the same time, they transformed these practices during the last few decades by diversifying their livelihood practices through extending their activities: they cultivate the land today to a lesser extent than in the past, with many villagers concentrating on a few cultivation areas where conditions are good for certain crops, or on small gardens

beside their houses. They no longer fish in the conservation area, and fishing is increasingly more like a leisure activity. Diversification has taken place regarding livelihood practices: Siviri villagers over the past few decades, and increasingly after Cyclone Pam, have engaged in a variety of activities to make their living—from cutting and selling firewood to wage labour—and mostly combined a number of such activities. This practice of the diversification of livelihood practices, as well as the intention to continue cultivation and fishing in the future, is found in every age group in Siviri.

When viewing these developments in Siviri against the background of the abovementioned definition of sustainability, quite a few of the activities of Siviri villagers seem to conform to a number of its features, such that their activities may be called 'sustainable' according to this definition: their actions are future-oriented, and they continually diversify their practices. At the same time, Siviri villagers explained that it is very important for them to maintain the existing: the cultivation of gardens and the continued existence of certain species of fish in order to continue fishing in the future. However, the maintenance of the existing is a criterion that has been consciously excluded from the definition.

Considering what they actually do in order to be able to continue with cultivation and fishing in the future reveals that villagers in Siviri are constantly changing and diversifying their practices to a considerable extent. By changing and diversifying their livelihood practices, Siviri villagers draw on the principle of diversification that has often been described for Oceania, especially regarding cultivation [43]. Hetzel and Pascht argued that people in Vanuatu have transferred this principle to other realms, namely to livelihood practices (Hetzel and Pascht 2019: 17). Diversification is an established principle employed in order to create new relations and networks (ibid.). By diversifying their livelihood practices, it is at the same time possible for ni-Vanuatu to continue cultivation. Additionally, by changing their fishing practices by establishing and maintaining a conservation area, Siviri villagers intend to preserve the species of fish and shellfish that they know. Regarding fishing, these people introduced something new in order to be able to continue the practice in the future. Thus, Siviri villagers create new methods of cultivation and conservation and continue cultivation and fishing, albeit in a transformed manner, and at the same time diversify their livelihood practices. They change their way of life in order to be able to continue cultivation and fishing and to preserve their multispecies world for the future [42]. Considering one of the main features of the definition of Brightman and Lewis, namely diversification, which implies change, this accords with the practices of Siviri inhabitants only partly, because it does not include continuity, which is very important for them.

Are the continuation of cultivation and fishing as well as the diversification of livelihood practices and the introduction and maintenance of the conservation area in Siviri strategies for preparing for an unpredictable future, as stated in the working definition of sustainability cited above? In order to answer this question, it is necessary to ask another ontological question, namely what 'future' and thus 'time' *is* for people in Vanuatu. Epeli Hau'ofa explains that beneath notions of time as lineal, other "nonlinear" or "circular" notions of time are prevalent in Oceania [44] (pp. 66–67), and that time in Oceania is not viewed as teleological [44]. The path from past to present to future is not linear; rather, the past lies ahead of the people and thus becomes the future [44] (p. 67). Marilyn Strathern also stresses that, in contrast to historiography, in Melanesia "a quite different sense of time is at issue" [45] (p. 161). She states that events encapsulate past and future [45] (p. 157), and thus postulates the simultaneity/concurrency of past and future [45] (p. 161).

Considering the results of my ethnographic work, I argue that these statements about time can also be applied to Siviri villagers' assumptions about time and thus about the future of cultivation and fishing: both activities are part of the world of Siviri villagers in the past and thus in the future; cultivation and fishing are simultaneously the past and the future. However, in order to be able to continue to perform these activities, villagers diversify their livelihood practices and establish and maintain the conservation area.

Additionally, in this regard, the concepts referred to in the definition—time and change—differ from those of Siviri villagers mainly because they presume that the future is unpredictable and thus is not connected to the past.

9. Conclusions

In this article, I have approached the topic of sustainability with an anthropological approach that focuses on ontological difference. I have raised the question of whether this might inspire further conceptual discussions about sustainability itself.

My ethnographic example demonstrates that Siviri villagers act in order to preserve cultivation and fish(ing) and thus to preserve their world. This world, however, is not a stable one, but one they actively change, especially by diversifying their activities. They create a world that includes the possibility of keeping what already exists while, at the same time, establishing new relations with people, environments and new practices. Preserving these ways of relating to and interacting with their environment for the future means, at the same time, enacting the past—but in a transformed manner. Siviri villagers preserve what existed in the past, namely cultivation and fishing, for the benefit of the future, but at the same time, they do not maintain what existed before and actively bring about changes.

Relating my ethnographic results to the working definition of sustainability from Brightman and Lewis cited in the introduction of this article, it becomes clear that the conditions for sustainability in this definition do not match the practices of Siviri villagers regarding cultivation and fishing for the future. The conceptualisations of the villagers and those used in the definition—especially of change and continuity and of time itself in more general terms—are ontologically different. Looking at the answers to the ontological questions I have identified shows that continuing cultivation and fishing is an important part of the villagers' world. However, this does not mean that there are no changes; connected with this, these people conceptualise the preservation and maintenance of the existing, as well as the future and the past, in a different way than the terms used in the working definition. In this context, the future for ni-Vanuatu villagers in Siviri is not unpredictable; although it is changeable, it is manageable by re-enacting the past and articulating it with the present environment. Thus, the practices of diversification and conservation are future-oriented, but not in the same way as implied in the definition of sustainability cited above. Diversification and conservation are not strategies to prepare for an unpredictable future but are rather practices that enable villagers to continue cultivation and fishing—they are past and future at the same time. As I have shown, this does not mean that there are no changes; on the contrary, people are eager to engage in new practices they create in encounters with their environment.

Does the lack of correspondence between the conditions mentioned in Brightman's and Lewis' working definition and the notions and practices of the villagers mean that they do not act sustainably? I argue that this is a question that can only be discussed through informed dialogues with villagers that consider this alterity. Such dialogues could take place, for example, during the implementation of development projects that intend to introduce sustainable fishing practices.

In this article, I have presented my research results and the experiment to apply ontological questions to my ethnographic material and experiences and then relating it to a working definition of 'sustainability' from a recent publication. The result shows that the asking of ontological questions by anthropologists can contribute to discussions about the definition of sustainability by drawing attention to the alterity of conceptualisations and definitions in different contexts and locations. Anthropological research that considers ontological questions thus suggests that discussions and deliberations regarding sustainability have to consider that there may be ontological differences regarding central concepts and thus that there may be misunderstandings between, for example, different parties participating in projects and workshops aiming to introduce methods for a more sustainable life. In order to prevent such misunderstandings and facilitate constructive collaboration between different parties, it is thus essential to allow for the possibility of

ontological difference, to ask ontological questions, and to address these differences in conversations and interactions. Dialogue and conversation then may lead to new, localised and contextualised definitions of sustainability.

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References

1. Holbraad, M.; Pedersen, M.A. *The Ontological Turn: An Anthropological Exposition*; Cambridge University Press: Cambridge, UK, 2017; ISBN 9781107503946.
2. Brightman, M.; Lewis, J. *The Anthropology of Sustainability*; Palgrave Macmillan US: New York, NY, USA, 2017; ISBN 978-1-137-56635-5.
3. Rollason, W. (Ed.) Introduction: Pacific Futures, Methodological Challenges. In *Pacific Futures: Projects, Politics and Interests*, 1st ed.; Berghahn Books: New York, NY, USA, 2014; pp. 1–27, ISBN 978-1-7823-8350-5.
4. Rollason, W. (Ed.) *Pacific Futures: Projects, Politics and Interests*, 1st ed.; Berghahn Books: New York, NY, USA, 2014; ISBN 978-1-7823-8350-5.
5. Barnes, J. *Environmental Futures*; John Wiley and Sons: Hoboken, NJ, USA, 2016; ISBN 1119278325.
6. Appadurai, A. *The Future as Cultural fact: Essays on the Global Condition*; Verso: London, UK, 2013; ISBN 9781844679829.
7. Bryant, R.; Knight, D.M. *The Anthropology of the Future, First Published*; Cambridge University Press: Cambridge, UK, 2019; ISBN 978-1-108-42185-0.
8. Haug, M. Framing the Future through the Lens of Hope: Environmental Change, Diverse Hopes and the Callenges of Engagement. ZfE/JSCA. *Z. Für Ethnol.* **2021**, *145*, 71–92.
9. Department of Strategic Policy, Planning and Aid Coordination, Republic of Vanuatu. *Vanuatu 2030: The Peoples Plan. National Sustainable Development Plan 2016–2030*; Department of Strategic Policy, Planning and Aid Coordination: Port Vila, Vanuatu, 2016.
10. Brightman, M.; Lewis, J. (Eds.) Introduction: The Anthropology of Sustainability: Beyond Development and Progress. In *The Anthropology of Sustainability*; Palgrave Macmillan US: New York, NY, USA, 2017; pp. 1–34, ISBN 978-1-137-56635-5.
11. Almeida, M.; de Barbosa, W. Local Struggles with Entropy: Caipora and Other Demons. In *The Anthropology of Sustainability*; Brightman, M., Lewis, J., Eds.; Palgrave Macmillan US: New York, NY, USA, 2017; pp. 273–290, ISBN 978-1-137-56635-5.
12. Moore, H.L. What Can Sustainability Do for Anthropology? In *The Anthropology of Sustainability*; Brightman, M., Lewis, J., Eds.; Palgrave Macmillan US: New York, NY, USA, 2017; pp. 67–80, ISBN 978-1-137-56635-5.
13. Escobar, A. Sustaining the Pluriverse: The Political Ontology of Territorial Struggles in Latin America. In *The Anthropology of Sustainability*; Brightman, M., Lewis, J., Eds.; Palgrave Macmillan US: New York, NY, USA, 2017; pp. 237–256, ISBN 978-1-137-56635-5.
14. Maida, C.A. *Sustainability and Communities of Place*; Berghahn Books: New York, NY, USA, 2007; ISBN 9780857451460.
15. Flick, U.; Kvale, S.; Angrosino, M.V.; Barbour, R.S.; Banks, M.; Gibbs, G.; Rapley, T. *The Sage Qualitative Research Kit*; Sage: London, UK, 2007; ISBN 978-0-7619-4977-0.
16. Quinlan, M. Considerations for Collecting Freelists in the Field: Examples from Ethobotany. *Field Methods* **2005**, *17*, 219–234. [CrossRef]
17. Weisser, F.; Bollig, M.; Doevenspeck, M.; Müller-Mahn, D. Translating the 'adaptation to climate change' paradigm: The politics of a travelling idea in Africa. *Geogr. J.* **2014**, *180*, 111–119. [CrossRef]

18. Rudiak-Gould, P. Climate Change and Anthropology: The Importance of Reception Studies. *Anthropol. Today* **2011**, *27*, 9–12. [CrossRef]
19. Tsing, A.L. *Friction: An Ethnography of Global Connection*; Princeton University Press: Princeton, NJ, USA, 2005; ISBN 9780691120652.
20. Blaser, M. The Threat of the Yrmo: The Political Ontology of a Sustainable Hunting Program. *Am. Anthropol.* **2009**, *111*, 10–20. [CrossRef]
21. Viveiros de Castro, E. Cosmological Diexis and Amerindian Perspectivism. *J. R. Anthropol. Inst.* **1998**, *4*, 469. [CrossRef]
22. Holbraad, M. Turning a corner: Preamble for "The relative native" by Eduardo Viveiros de Castro. *HAU J. Ethnogr. Theory* **2013**, *3*, 469–471.
23. Pascht, A.; Dürr, E. (Eds.) Engaging with environmental transformation in Oceania. In *Environmental Transformations and Cultural Responses: Ontologies, Discourses, and Practices in Oceania*; Palgrave Macmillan US: New York, NY, USA, 2017; pp. 1–18, ISBN 9781137533487.
24. Hetzel, D.; Pascht, A. Climate change and livelihood practices in Vanuatu. In *Dealing with Climate Change on Small Islands: Towards Effective and Sustainable Adaptation*; Klöck, C., Fink, M., Eds.; Göttingen University Press: Göttingen, Germany, 2019; pp. 195–216, ISBN 978-3-86395-435-2.
25. Mückler, H. Vanuatu. In *Die Außenpolitik der Staaten Ozeaniens: Ein Handbuch; von Australien bis Neuseeland, von Samoa bis Vanuatu*; Dittmann, A., Gieler, W., Kowasch, M., Eds.; Schöningh: Paderborn, Germany, 2010; pp. 161–170, ISBN 9783506768001.
26. Kelman, I.; West, J.J. Climate Change and Small Island Developing States: A Critical Review. *Ecol. Environ. Anthropol.* **2009**, *5*, 1–16.
27. FAO. *Climate Change and Food Security in Pacific Island Countries*; FAO: Rome, Italy, 2008.
28. McNamara, K.E.; Prasad, S.S. Coping with extreme weather: Communities in Fiji and Vanuatu share their experiences and knowledge. *Clim. Change* **2014**, *123*, 121–132. [CrossRef]
29. Brookfield, H.C.; Hart, D. *Melanesia: A Geographical Interpretation of an Island World*; Methuen: London, UK, 1971; ISBN 9780416171204.
30. Bell, J.D.; Johnson, J.E.; Hobday, A.J. *Vulnerability of Tropical Pacific Fisheries and Aquaculture to Climate Change: Summary for Pacific Island Countries and Territories*; Secretariat of the Pacific Community: Noumea, New Caledonia, 2011; ISBN 978-982-00-0508-2.
31. David, G. *Development Prospects for Fish Production in Vanuatu: A Geographical Approach*; ORSTOM-Fisheries Department: Port-Vila, Vanutau, 1989.
32. Johannes, R.E. *Government-Supported, Village-Based Management of Marine Resources in Vanuatu*; FFA Report 94/02; FFA: Honiara, Solomon Islands, 1998.
33. Johannes, R.E. The Renaissance of Community-Based Marine Resource Management in Oceania. *Annu. Rev. Ecol. Syst.* **2002**, *33*, 317–340. [CrossRef]
34. NAB. Kaikai blong laef-ADRA Vanuatu Food Security Pilot Project. 2018. Available online: http://nab.vu/projects/kaikai-blong-laef-adra-vanuatu-food-security-pilot-project#maptop_key_1 (accessed on 15 May 2016).
35. Thaman, R.R. Mixed Home Gardening in the Pacific Islands: Present Status and Future Prospects. In *Tropical Home Gardens: Selected Papers from an International Workshop Held at the Institute of Ecology, Padjadjaran University, Bandung, Indonesia, 2–9 December 1985*; Brazil, M., Landauer, K., Eds.; United Nations University Press: Tokyo, Japan, 1990; pp. 41–65, ISBN 9280807323.
36. Manner, H.I.; Thaman, R.R. Agriculture. In *The Pacific Islands*; Rapaport, M., Ed.; University of Hawaii Press: Honolulu, HI, USA, 2013; pp. 341–354, ISBN 9780824835866.
37. McDonnell, S. Other Dark Sides of Resilience: Politics and Power in Community-Based Efforts to Strengthen Resilience. *Anthropol. Forum* **2020**, *30*, 55–72. [CrossRef]
38. Rey, T.; Le De, L.; Leone, F.; Gilbert, D. An integrative approach to understand vulnerability and resilience post-disaster. *DPM* **2017**, *26*, 259–275. [CrossRef]
39. Hetzel, D. Moving Lives. Gardening Practices and Climate Change in Vanuatu. Ph.D. Thesis, Ludwig-Maximilians-Universität, Munich, Germany, 2021.
40. Lindstrom, L. Chiefs in Vanuatu Today. In *Chiefs Today: Traditional Pacific Leadership and the Postcolonial State*; White, G.M., Lindstrom, L., Eds.; Stanford University Press: Stanford, CA, USA, 1997; pp. 211–228.
41. Calandra, M. Disasta: Rethinking the Notion of Disaster in the Wake of Cyclone Pam. *Anthropol. Forum* **2020**, *30*, 42–54. [CrossRef]
42. Pascht, A. Marine Conservation in Vanuatu: Local 'Assemblage' of Fish and Humans. *Ambio* **2022**. *submitted for publication*.
43. Barrau, J. *Subsistence Agriculture in Melanesia*; Bernice, P., Ed.; Bishop Museum: Honolulu, HI, USA, 1958.
44. Hau'ofa, E. *We Are the Ocean: Selected Works*; University of Hawaii Press: Honolulu, HI, USA, 2008; ISBN 082483173X.
45. Strathern, M. Artifacts of History: Events and the Interpretation of Images. In *Culture and History in the Pacific*; Siikala, J., Ed.; Finish Anthropological Society: Helsinki, Finland, 1990; pp. 25–44.