Agroecological tourism: bridging conservation, food security and tourism goals to enhance smallholders’ livelihoods on South Pentecost, Vanuatu

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Abstract

Smallholder farmers continue to make up the largest proportion of the world’s disadvantaged, particularly in the South Pacific where Pacific Island countries are amongst the most vulnerable to climate change, underinvestment and growing competition for land and resources. Strengthening synergies between agriculture and tourism through avenues such as agritourism has been widely discussed; however, very little research has approached these concepts from a sustainability perspective. This case study of rural Ni-Vanuatu smallholders uses the Agroecology and Sustainable Rural Livelihoods Framework (ASRLF) to explore tourism’s potential contribution to improved conservation and food security outcomes. Data collection combined participatory methods such as ‘storian sessions’ with analysis of secondary data. The findings highlight minimal current opportunities for rural Ni-Vanuatu smallholders to gain significantly from the tourism sector in Vanuatu. The shift from traditional gardening systems to cash cropping monocultures is also conflicting with tourism and conservation goals. This paper puts forward agroecological tourism as a strategy for integrating positive conservation, food security and livelihood outcomes for rural smallholders. It defines agroecological tourism as having a primary focus on the interpretation of sustainable traditional agroecosystems which exhibit cultural and heritage significance. Agroecological tourism has potential to support traditional practices, enhance the preservation of cultural knowledge and promote sustainable farming practices.

Introduction

Smallholder farmers continue to make up the largest proportion of the world’s disadvantaged, particularly in the South Pacific where Pacific Island countries are amongst the most vulnerable to climate change, underinvestment and growing competition for land and resources (IFAD, 2013). This competition for land and resources are placing increasing pressures on tropical forests in many South Pacific islands. As the global community grapples with the consequences of unprecedented levels of carbon dioxide emissions, global attention is paid to the role of forests in not only reducing carbon releases (deforestation is responsible for 20% of annual carbon releases) but also the potential for tropical forests to store carbon (Kremen et al., 2000). With this increased attention comes the formation of Community Conservation Areas (CCA) in developing countries. Recognising that the large
majority of land in Melanesia is held under customary title, there has been an increased focus on the creation of CCAs in this region (FPAM, 2014). CCAs seek to enhance the sustainable livelihoods of local communities while also strengthening biodiversity conservation and the reduction of forest and land degradation (FPAM, 2014). The challenge for CCAs is striking the balance between the goals of conservationists and rural smallholders. Brown (2002) suggests it is not uncommon for forest- and agriculture-dependent communities to prioritise short-term livelihood improvements which may not be compatible with global long-term conservation goals. Kremen et al. (2000) observes local communities incurring the cost of losing access to these areas for the sake of conservation.

This article focuses on rural smallholders in a newly formed CCA and seeks to explore options that support rural smallholders’ livelihoods, food security and conservation objectives. There is a current focus in the South Pacific on how linkages between tourism and agriculture can improve livelihoods for rural smallholders while maintaining food security and resilience (IICA, 2015). While there is no shortage of literature linking sustainable development with agriculture or tourism, there is minimal discourse merging and extending these dialogues to enable improved food security and conservation outcomes that enhance rural smallholders’ livelihoods in a holistic manner. Thus, any attempt at strengthening linkages between smallholder farming and tourism in a South Pacific context needs to focus on sustaining smallholder farming both economically and ecologically, while finding ways to support a tourism ‘product’ that is also viable and sustainable.

There has been considerable discussion to enhance synergies between agriculture and tourism through avenues such as agritourism (Arroyo, Barbieri, & Rich, 2013; Flanigan, Blackstock, & Hunter, 2014; Phillip, Hunter, & Blackstock, 2010); however, there has been very little research approaching these concepts from a sustainability perspective. This study addresses this gap in the literature and practice by employing the concepts of agroecology and sustainable livelihoods to analyse tourism and its contribution to smallholders’ livelihoods in Vanuatu. More specifically, this study examines the potential for agroecology models to enhance the synergies between tourism, conservation and traditional agroecosystems with the wider food network.

Vanuatu, Papua New Guinea, and the Solomon Islands are unusual in that they are amongst the last remaining countries in the world where the traditional economy (also known as the subsistence economy, custom economy) takes precedence over the cash economy in terms of providing for livelihoods (Regenvanu, 2010). While it has been largely documented that the traditional (subsistence) economy is no longer able to meet the modern needs of most rural smallholders (Hayes, 1993; Easterley & Kraay, 2000), Anderson (2011) warns of the potential for many Western-based growth strategies to negatively impact on rural livelihoods. Moreover, neglect and marginalisation of
smallholders in economic and development policy are contributing to their increasing vulnerability (IFAD, 2013), further exacerbated in countries such as Vanuatu which are amongst the world’s most vulnerable nations to the impacts of climate change (World Bank, 2012).

Vanuatu’s Islands are of volcanic origin, located in the South West Pacific, between the Solomon Islands to the north and New Caledonia to the southwest (Chand, 2002) (see Figure 9). Vanuatu has a total land area of 12,190 square km which was divided into six provinces in 1994 (Cheer, 2013). The population of Vanuatu consists of approximately 250,000 people comprising mainly Ni-Vanuatu who are concentrated on 16 main islands (Black & King, 2002). In 1980, Vanuatu gained independence and has been classed as a Least Developed Country (LDC) by the United Nations (AusAID, 2011) with few economic resources. Remoteness, isolation and inaccessibility affect Vanuatu’s economic development (Prasad & Giacomelli, 2012).

![Geographical location of Vanuatu and field sites on Pentecost](image)

**Geographical location of Vanuatu and field sites on Pentecost**

In Vanuatu, discussions surrounding kastom (custom) and reinvention of tradition lie deeply in post-colonialism and national identity (Alivizatou, 2012). Many Ni-Vanuatu rural smallholders are inherently aware of the risks of a market-based economy putting forward their desires to strengthen the traditional economy (Regenvanu, 2010), by integrating the cash economy and political institutions...
to work within communal structures and resource ownership in a sustainable manner (Westoby, 2010). Traditional farming has long played a vital role in achieving food security, in addition to important economic, environmental and socio-cultural roles. Traditional gardening systems are ‘vehicles for food security, housing, widespread employment, social security, biodiversity protection and ecological stability; they are also a store of natural medicines, as well as a source of social cohesion, inclusion and cultural reproduction’ (Anderson, 2011, p. 86). These systems enable rural smallholders to continue to operate within the traditional economy which encourages sustainable economic activity at the individual and household level while operating within reciprocal networks of exchange and obligation at the community level (Addinsall, Glencross, Scherrer, Weiler, & Nichols, 2015).

Agriculture and tourism make up the priority sectors for Vanuatu’s economy. Yet unlike agriculture, the tourism industry continues to provide limited benefits to rural smallholders and communities as a consequence of foreign ownership, high economic leakage and concentration in tourism enclaves (de Burlo, 2003; Stefanova, 2008). This study seeks to provide a systematic and deeper understanding of how tourism can be leveraged by rural Ni-Vanuatu smallholders situated in a CCA to enhance livelihood opportunities while contributing to food security and conservation goals. It does so by applying the lens of the Agroecology and Sustainable Rural Livelihoods Framework (ASRLF) in a case study of rural Ni-Vanuatu smallholders in the local communities of the newly formed Bay Homo CCA in South Pentecost, Vanuatu. This study compresses the spatial scale to a single location case study and expands the temporal scale (Weaver, 2015) to show a commitment to understanding rural smallholders’ needs and aspirations alongside the potential positive and negative effects of tourism development. This approach seeks to harness social change as a tool to achieve sustainable tourism rather than merely to study it (Weaver, 2015).

The paper commences with a literature review on the relationships between agriculture, conservation and tourism, with specific focus on the tensions and trade-offs between these areas, including rural development literature in the areas of the traditional economy, agroecology and sustainable livelihoods. Much has been written on the intersections of agriculture and conservation, and of tourism and conservation, but there is a paucity of literature into the relationships into the nexus of all three – agriculture, conservation and tourism – in the developing world (Telfer & Wall, 1996, 2000; Torres, 2002, 2003; Torres & Momsen, 2004). Torres and Momsen (2011) see the developing world as having a relationship between agriculture, tourism and conservation that is multi-faceted, complex and variable.
To address these complexities, the Methodology section provides a framework for collecting and organising multiple data sets that are sympathetic to cultural complexities and enables the research process to be locally specific. Multiple data sets are constructed and presented within the individual components of the ASRLF to provide a backdrop for examining and interpreting the data. Information is given in the findings and discussion section using each component of the ASRLF (Livelihood assets, Institutional processes and organisational structures, Vulnerability/sustainability context, and Agroecological and sustainable livelihood strategies and outcomes). Strategies are put forward in the findings and discussion section for rural smallholders that address the aim of the study within a rural Vanuatu study context while also being informed by the ASRLF and the literature that underpins it.

**Literature review**

The South Pacific region shares a multitude of issues causing significant impacts on people’s livelihoods such as vulnerability to climate change, soaring food import bills, and high levels of non-communicable diseases (IICA, 2015). Rural smallholders make up the largest proportion of the world’s disadvantaged and struggle to compete in a globalised economic environment (Rudel, DeFries, Asner, & Lawrence, 2009). While the majority of Ni-Vanuatu live in rural areas and are reliant on local systems of food production (Morgan, 2013), growing numbers of rural smallholders are leaving their farms for urban migration due to increasing needs for income generation. Urban migration increases many developing countries’ dependence on food imports. In 2009, 111 developing countries were classified as ‘net food importers’ threatening food security, creating dependence on packaged and nutritionally deficient foods and exposing more people to volatile global markets (Valdes & Foster, 2012).

Many rural smallholders in Vanuatu continue to rely on access to customary land, forest and marine resources for their livelihoods (Anderson, 2011). Simo (2010) identifies customary land as not being owned by individual men or women; instead, families, clans or tribes are seen as custodians of the land. Customary land has been described as playing a central role in the cultural and spiritual identity of smallholders, while also providing the majority of the population with access to resources that provide shelter, medicine and food security (Simo, 2010). A pilot study reporting on Vanuatu well-being (VNSO, 2012) identified a positive correlation between full or partial access to customary lands (along with forest or marine resources) and perceived happiness (VNSO, 2012). Yet, many studies concerning the use of customary land, forest and marine resources continue to focus on productive activities related to the cash economy, overlooking factors related to subsistence and traditional activities. Solely focusing development on economically profitable activities and discrediting subsistence and traditional activities also jeopardises traditional skills being utilised or passed down generations (McMahon, 2012).
The negative environmental consequences of increasing engagement in the cash economy with agricultural systems are continuing to be documented (Rapley, 2006). Cash cropping for both domestic and international markets is playing an important role for rural smallholders to remain on customary land while meeting rising costs such as school and medical fees, mobile phones and inter-island transport (Morgan, 2013). Yet, consequences of increasing reliance on cash cropping is seeing many rural smallholders adapting their farming systems to incorporate the expansion of monoculture systems. For example, the steep rise in the use of the kava plant (*Piper methysticum*) has led to increased cultivation rates and environmental impacts due to the loss of native tropical forest (Merlin & Rayner, 2005). This can lead to the oversimplification of agroecosystems to monoculture production and homogeneity of agricultural landscapes (Gliessman, 2015). Monoculture production impacts on the many essential ecosystem services that forests can provide such as water allocation and purification, carbon sequestration, suppression of pests, and eradication of diseases and toxic compounds (Altieri, 1999).

Shrybman (2000, p. 1) argues that ‘the globalisation of agricultural systems over recent decades is likely to have been one of the most important causes of overall increases in greenhouse gas emissions’. These factors are influencing an alternative way of thinking that sees smallholder farms as livelihood systems incorporating food security and a diversification of both on and off-farm income-generating activities. These alternative views have led to the formation of agroecology which facilitates agricultural linkages with conservation, biodiversity, soil and water health, tourism and leisure activities, non-use values and quality of life (Lovell et al., 2010).

Further research is needed to develop supportive frameworks for income generation in rural areas that build on existing organisational and traditional structures (Addinsall, Glencross, Scherrer, et al., 2015). Manley (2007) highlights the contribution to resilience from integrating traditional and formal economic practices. Agroecology is one such framework that can support the integration of the traditional and cash economies. The entry of social sciences into agroecology emerged in the late 1990s (Guzman, Gonzalez, Molina, & Sevilla, 2000), as scholars recognised the importance of exposing growing injustices and inequalities surrounding global food production (Gliessman, 2015). This helped to transform agroecology to be more inclusive of farmers and traditional, local and Indigenous knowledge systems (Wezel & Jauneau, 2011).

The interdisciplinary field of agroecology today encompasses the ‘scientific study of ecological processes in agroecosystems, the promotion and support of farming practices rooted in the goal of sustainability, and the advancement of the complex social and ecological shifts that need to occur to move food systems to a truly sustainable basis’ (Gliessman, 2015, p. 29). Over the last decade,
agroecology has evolved from its foundations of ecology and agronomy to encompass a social
movement with a focus on ‘the ecological foundations of the traditional farming systems in developing
countries’ (Gliessman, 2015, p. 29). With this transition has come the connection between
agroecological research, sustainable agriculture and conservation (Altieri, 2002; Altieri, Funes-
Monzote, & Peterson, 2011; Gliessman, 2007; Vandermeer, 2009). Traditional gardening systems,
defined as ‘sets of interconnected customary practices of producing crops and animals for food, socio-
cultural uses and export which conserve resources, protect the environment and are passed down
from generation to generation’ (Tofinga, 2001, p. 34), play a key role in achieving food security and
sustainability. The focus on meeting subsistence requirements in traditional gardening systems makes
them difficult to incorporate into relative wealth measurements (Anderson, 2011). Sustainable
livelihood studies (Ellis, 2000) have instead valued subsistence activities in imputed price terms,
preferring to be more concerned with financial wealth measurement. The declaration of the
International Forum for Agroecology 2015 (Anderson, Pimbert, & Kiss, 2015, p. 1) challenges focusing
solely on economic gains and describes the agroecology movement as a ‘key form of resistance to an
economic system that puts profits before life’.

Wider discussions are now emerging on the impacts of tourism and how alternative forms of tourism
can provide positive benefits to both conservation initiatives and host communities (Hunt, Durham,
Driscoll, & Honey, 2015). The Bruntland Commission’s report (WCED, 1983) specifically emphasised
the need for an interdisciplinary approach to development, suggesting that ‘the environment is where
we live and development is what we are doing to improve our lot within that abode. The two are
inseparable’ (p. 7). Around this time, Krippendorff (1987) was also highlighting sustainable forms of
development in tourism, calling for a new form of tourism that will bring ‘the greatest possible benefit
to all the participants-travellers, the host population and businesses without causing intolerable
ecological and social damage’ (p. 106). He highlighted the need for the maintenance of a diversified
economy and an emphasis on cultivating what is typically local and for locals to maintain control over
their land. Terms such as pro-poor tourism and responsible tourism originated from these discussions
to describe tourism impacts and activities; yet, three decades later, they are only now starting to gain
traction in Vanuatu (Scheyvens & Russell, 2013).

Agritourism as a rural development strategy has been discussed in the literature for some time now.
It has been suggested that agritourism is not a homogenous concept and that there is little clarity in
defining its key features (Phillip et al., 2010). Little (2006) defines agritourism (also labelled as
agrotourism) as a ‘strategic economic activity that could engage rural communities in a mix of activities
that provide food-related products and leisure within the productive agricultural property’ (p. 10).
Arroyo et al. (2013) add the educational component and define agritourism as ‘farming-related
activities carried out on a working farm or other agricultural setting for entertainment or education purposes’ (p. 46). Authors such as Flanigan et al. (2014) responded to the lack of consensus and developed an agritourism typology proposing five different types of agritourism based on multiple definitions. There is a call for studies to determine whether these definitions are universal, as most studies on agritourism have taken place in the developed world (Arroyo et al., 2013). Also, the literature surrounding agritourism does little to link sustainability and conservation of resources to tourism and agriculture.

The ASRLF (see Addinsall, Glencross, Scherrer, et al., 2015) was created to build linkages between rural smallholders’ livelihoods, sustainability and conservation of resources. The ASRLF addresses concerns surrounding approaches to rural development in the South Pacific Islands and elsewhere (Addinsall, Glencross, Scherrer, et al., 2015). By synthesising agroecology and sustainable livelihoods into an integrated framework, the ASRLF can guide development-focused studies to encompass a more holistic view which recognises both objective and subjective measures of well-being and sustainability.

Critics of the SLF suggest there is little evidence of success in integrating local contexts and responses with concerns for global environmental change (Adams et al., 2004; Ashley, 2000; Brown, 2002; Cater, 1994; Cattarinich, 2001; Croes & Vanegas, 2008; Hall, 2007; Harrison, 2008; Nyaupane & Thapa, 2004; Ollenburg & Buckley, 2007; Salafsky & Wollenberg, 2000; Upton et al., 2008). The ASRLF helps to ensure that the research process empowers change from the bottom-up by providing an enabling environment for smallholders to contribute their knowledge to address complex problems. Strong institutional and land tenure arrangements are regarded as an essential requirement to creating sustainable livelihoods and supporting agroecosystems (Smyth & Whitehead, 2012).

The ASRLF guides the research process of this study through a series of steps which begin at the smallholder level and work upwards in a participatory method of enquiry (Addinsall, Glencross, Scherrer, et al., 2015). Each section of the findings and discussion is guided by the individual components of the ASRLF.

**Methodology**

This paper focuses on the Bay Homo CCA in South Pentecost, PENAMA province. Specifically, the focus is on the ten villages of Pangi, Palemsi, Wali, Ranbutor, Ranwas, Point Cross, Bay Homo, Salap, Wanuru and Bunlap, which have formally committed part of their land to be developed into the Bay Homo CCA. This CCA was established in collaboration with the Food and Agriculture, Global Environment Facility, Forestry and Protected Area Management (GEF-FPAM) in 2014. The Bay Homo CCA consists of 3677 ha of terrestrial protected area and 1000 ha of marine protected area in which various
agroecological practices such as subsistence agriculture, agroforestry and catchment regeneration and conservation are undertaken.

In order to provide a comprehensive overview of the whole livelihood system for each study site (Cahn, 2006), it was important to collect data from rural Ni-Vanuatu smallholders and external stakeholders. Therefore, research participants were characterised into two groups consisting of internal and external informants. Within each group, varying methods of data collection (e.g. semi-structured interviews, community discussions and storian) were applied.

Internal informants consisted of rural Ni-Vanuatu smallholders and their families within the ten villages. Small group chats, as opposed to one-on-one interviews and large focus groups, were found to be effective, supported by Warrick (2009) who reported that small group interviews worked exceptionally well and suited Ni-Vanuatu participants’ ways of communicating. She labelled these techniques as ‘storian’, which is the Bislama term for ‘chatting, yarning or swapping stories’ (Crowley, 1995, p. 235).

The project team explored with rural Ni-Vanuatu smallholders their current practices with regard to key components of the ASRLF. These components consisted of how rural Ni-Vanuatu smallholders are informed by traditional farming practices, their aspirations, diversified livelihood strategies and engagement in the tourism industry, their current assets and capacity to reach sustainable livelihood outcomes and internal power and gender relations that may impact on achieving sustainable livelihoods.

The number of internal informants from each village ranged between six and ten depending on actual population size. Sampling in the internal groups consisted of a combination of criteria and snowballing sampling methods (Patton, 1990). All storian sessions with internal participants were conducted in Bislama by trained local research assistants. A list of semi-structured questions provided a flexible guide and prompts for the interviewer to ensure key topics were covered. Notes were taken in English by the local research assistant as well as the observing researcher, as participants sought not to be audio-recorded. Thus, no direct quotes were captured. Notes of the research assistant and observing researcher were compared at the end of each storian session to ensure consistency with the interpretation of discussions.

Fifteen external informant interviews were conducted in total. They consisted of tourism sector stakeholders operating within close proximity of the sites; donor and development stakeholders; government officials such as the Department of Tourism (DoT); Department of Forestry (DoF); Department of Agriculture (DoA); Ministry of Environment; Vanuatu Tourism Organisation (VTO);
Department of Cooperatives (DoC); and Department of Industry (DoI). Interviews were conducted in English and captured through notetaking. They sought to elicit the strengthening of linkages between communities and the wider market as well as current institutional arrangements that help or hinder capacity-building amongst smallholders. External informants were selected based on their position within their organisation and relevance to rural Ni-Vanuatu smallholders in South Pentecost. Primary data collection took place during six weeks between October 2014 and April 2015.

Secondary data sources such as the Vanuatu Tourism Master Plan and the South Pentecost Tourism Strategy as well as published and online information from VTO, Vanuatu Governmental Departments, South Pentecost Tourism Council (SPTC) and private tourism companies were reviewed. At least one of the authors attended group workshops and discussions with senior governmental representatives, NGOs, academics and tourism industry representatives throughout the study. These workshops and discussions were invaluable for gaining insight and anecdotal information on the policies and procedures related to conservation and tourism development in the regions where the study is focused.

Thematic analysis was used to identify themes that emerged from the data (Browne, 2004), which were guided by the views and issues identified by the participants. The challenge for analysing and interpreting qualitative data is to do justice to the complexity of meanings and ambiguity (Neuman, 2003) that may be present. This study responds to these difficulties by utilising the individual components of the ASRLF to guide each step of the research process.

The individual components of the ASRLF (Livelihood assets, Institutional processes and organisational transforming structures, Vulnerability and sustainability context, and Agroecological and sustainable livelihood strategies and outcomes) were used to organise the multiple data sets. These consisted of notes from the semi-structured interviews; storian and community discussions; and highlighted extracts from secondary data sources. A manual analysis enabled a rigorous assessment of themes in relation to agroecological sustainable rural livelihoods. These themes provided the basis for unpacking how conservation, agroecology and tourism contribute or detract from the creation and maintenance of sustainable livelihoods (Chambers & Conway, 1992).

**Findings and discussion**

Presented in Table 2 is an overview of the ASRLF components and the findings/discussion that relate to each component. The four subsections that follow correspond with the third column of this table.

**Summary of findings/discussion that relate to each component of the ASRLF**
<table>
<thead>
<tr>
<th>Individual components of the ASRLF</th>
<th>Description of each component of the ASRLF</th>
<th>Summary of findings/discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livelihood assets of agroecologically based smallholders</td>
<td>Human, social, physical, natural, financial</td>
<td>Lack of diversity of livelihood/income generation options for rural Ni-Vanuatu smallholders in the Bay Homo CCA</td>
</tr>
<tr>
<td>Institutional processes and organisational structures</td>
<td>Land tenure, governance, public/private sector</td>
<td>Unsustainable use of resources due to shifting livelihood priorities</td>
</tr>
<tr>
<td>Vulnerability/sustainability context</td>
<td>Political economy, agroecological, socio-cultural, socio-economic</td>
<td>Lack of progress in implementing policy contributing to sustainable livelihoods in South Pentecost</td>
</tr>
<tr>
<td>Agroecological and sustainable livelihood activities and outcomes</td>
<td>Agroecological multi-functionality, diversified off and non-farm income, traditional economy, food security, resilience, sustainability, equity</td>
<td>Strategy to support sustainable livelihoods, food security and conservation goals: <em>Agroecological tourism</em></td>
</tr>
</tbody>
</table>

*Lack of diversity of livelihood/income generation options for rural Ni-Vanuatu smallholders in the Bay Homo CCA*

The first overarching theme was the lack of diversity in income generation amongst rural Ni-Vanuatu smallholders, while the traditional economy outweighed the cash economy in providing for livelihoods. The livelihood activities of internal participants was largely based on meeting subsistence needs through traditional gardening systems followed by specific target work such as cash cropping. The casual income-generating activities often took place at certain times of the year when school fees were due or significant purchases were required such as the upgrading/repair of households or medical expenses. Many internal participants developed traditional gardening systems that integrated...
use of cash and staple crops, trees, extended fallow times and natural rain feed irrigation producing extremely sophisticated techniques for irrigated taro gardens (from the Araceae family and genus *Colocasia esculenta*) in the low-lying coastal communities. These water taro gardens were described by internal participants as producing a highly sought after crop of the highest yields.

Findings revealed a lack of diversity in agricultural cash crops grown for the domestic market which government departments in Vanuatu have identified as lost opportunities to supply a range of locally organic produce to the tourism industry. Mael (2011) found that the greatest benefit rural Ni-Vanuatu smallholders could gain from the tourism industry came from supplying fresh produce to service the mainstream tourism market. For example, the sale of taro and kava (*P. methysticum*) was the main income source for both male and female internal participants with only minimal rural Ni-Vanuatu smallholders engaging in livestock, tourism and transport activities or formal employment such as governmental positions. The majority of participants employed in formal employment were male. These findings align with previous research undertaken into the livelihoods of rural Ni-Vanuatu which found men to be dominating both formal structures and the labour markets (Addinsall, Glencross, Rihai, et al., 2015).

The current structure of tourism is based largely on the operation of the nangol (land diving) for cruise ships and yachts docking at Bay Homo as well as tourists flying in from Port Vila. Findings from this study revealed that the operational structure and location of nangol sites currently operating in South Pentecost were seriously hindering the ability for the majority of the population to be involved in the tourism industry. Many internal participants suggested only a small number of people in hierarchal positions were generating majority of the profit from nangol operations. Previous studies have also cautioned against the overcommercialisation of the nangol (Cheer, Reeves, & Laing, 2013; Lipp, 2008; Tabini, 2010; Taylor, 2010), with concerns that the integrity of the activity is at risk (Huffman, 1987, 2011; Jolly, 1994).

Many internal participants placed great importance on trading goods and services and described this as participating in the traditional economy, which was suggested to be outweighing the cash economy in terms of providing for livelihoods. The traditional economy places a great importance on meeting subsistence needs for achieving food security while encouraging trade and economic activity at the individual and household level within reciprocal networks of exchange and obligation at the community level (Addinsall, Glencross, Scherrer, et al., 2015). These findings are supported by an Oxfam survey undertaken in 2009 which found little impact to rural communities in Vanuatu after the global financial crises (Feeny, 2010). Therefore, any development in rural areas of Vanuatu should be approached with a degree of caution, taking measures to gradually develop these activities alongside
traditional and subsistence activities while maintaining customary land ownership and a sustainable use of the resource base (FPAM, 2014).

As urban migration continues to rise, female internal participants in particular suggested that traditional knowledge and skills such as weaving, broom making, tree and crop planting, food roasting and medicine production skills are not being passed on. Even in relatively strong traditionally focused communities, there was concern for preservation of these key livelihood skills. Concerns were raised that the loss of skills to value-add forest and marine resources into useful assets could leave future generations in a vulnerable position particularly after extreme weather events, therefore relying on the volatile global economy for their livelihoods.

*Unsustainable use of resources due to shifting livelihood priorities*

A second overarching theme was the apparent unsustainable use of resources as a result of shifting livelihood priorities. With increased engagement in the cash economy, some communities were showing signs of moving away from traditional agricultural systems that consist of typically low-input, shifting agriculture to high-input monoculture cultivated systems which focused on dryland taro and kava production. The transition is driven by an increasing demand and price for kava and dryland taro but results in soil degradation which in turn has led to deforestation pressure on the newly formed Bay Homo CCA.

Some internal participants commented that, while they were not clearing land that they had signed up to the Bay Homo CCA, there was evidence of their land being cleared by farmers from other communities. While these internal participants suggested that tabus (customary declaration of taboo areas by displaying the namale leaf) had been issued on land within the Bay Homo CCA, some rural Ni-Vanuatu smallholders were not respecting these tabus. Interviews conducted with chiefs from South Pentecost revealed that in the past these tabus had been a relatively successful strategy for protecting resources, yet with new pressures associated with population increases, increased engagement in the cash economy and overexploitation of resources was limiting the effectiveness of these tabus.

Many internal participants identified the decline in resources available due to the pressures being placed on the Bay Homo CCA. There were significant concerns for water availability and quality with some internal participants stating that water levels had dropped significantly with the clearing of forest in the upper catchments. The decreasing availability of fresh water prawns within the Bay Homo CCA was also noted by many internal participants as a key concern. There were a number of resources that internal participants stated they relied on in the Bay Homo CCA to supplement their staple crops
(particularly after extreme climatic events) such as bush cabbage (*Hypolepis tenuifolia* and *Dennstaedtia samoensis*), wild taro (*Alocasia macrorrhiza*) and wild yams (*Amorphophallus campanulatus*). Species such as Breadfruit (*Artocarpus altilis*), coconut (*Cocos nucifera*), nuts (*Canarium* spp.), nangi, and pandanus (*Pandanus tectorius*) were also described as having multiple uses such as subsistence, building and handicrafts and medicinal purposes. With the increasing clearing of forest, nangol tourism operators explained they have to walk further into the Bay Homo CCA to extract fresh vines and timber for construction of the towers. This makes it crucial to gain an understanding from the Sa people as to the sustainability (both culturally and environmentally) of these operations and how future tourism development built around the nangol can work within the goals of the Bay Homo CCA. The findings reveal many additional pressures to areas within the newly formed Bay Homo CCA. To clearly address competing priorities, the management of the Bay Homo CCA will need to incorporate communities’ participation in conservation goals. Social, economic and environmental priorities of some rural Ni-Vanuatu smallholders in South Pentecost differ greatly with regard to the conservation and management of resources within the Bay Homo CCA which results in increased tension amongst some communities. This may require new strategies to be developed from the ground up that find a resolution between these competing priorities (FPAM, 2014).

*Lack of progress in implementing policy contributing to sustainable livelihoods in South Pentecost*

The ability of South Pentecost to be a competitive tourist destination and provide opportunities for rural Ni-Vanuatu smallholders relies on a number of factors such as the destinations’ cultural and natural resources; general infrastructure; market access and price; visitor experiences and quality of service (Dwyer & Kim, 2010). Case studies of successful tourism development in rural areas of Solomon Islands, Fiji and Vanuatu found strong policy commitment, legal frameworks that protect the rights of local people (particularly the most vulnerable) and socio-culturally grounded preparation of projects that enhance the empowerment of communities to participate in tourism (Sofield, 2003).

Interviews with external interviewees unveiled that, at present, there is no shortage of policy surrounding tourism development in Vanuatu. Yet, many internal participants expressed concern that even though newly formed tourism associations in the region had been developed to encourage and support tourism development, little progress had been made. Interviews with external stakeholders revealed that budgetary constraints and lack of high-level skills in positions responsible for implementing policy were limiting the productivity of many of these institutions.

Tourism policy initiatives on the national level such as the Vanuatu Strategic Tourism Action Plan (VSTAP) 2014–2018 (2013) highlight different measures to ‘deliver tourism-related benefits to the outer islands’ (p. 21), where tourism growth has been particularly slow. The strength in this policy
document is the recognition of ‘tourism-related’ benefits to rural Ni-Vanuatu smallholders in outer islands not just focusing on direct involvement in the tourism industry. As the majority of the population in the outer islands engage in subsistence farming, there is significant benefit to be gained by finding strategies to incorporate agricultural activities into the tourism industry.

New policy documents relating directly to South Pentecost such as the PENAMA Province Tourism Plan (PPTP, 2011) (developed by the PENAMA Provincial Tourism Council (PPTC) and the PENAMA Rural Economic Development Initiatives (REDI)) have been designed to complement and strengthen various policy initiatives such as the Priorities and Actions Agenda (PAA) 2006–2015; Draft ‘Building Tourism Today for Tomorrow’ Vanuatu Tourism Action Program (VTAP) 2008; and the Vanuatu Tourism Development Master Plan 2003. The PPTP (2011) is based on policies which ‘promote local interests, preserve local landscapes, culture and heritage, and match the industry to the local carrying capacity’ (p. 6).

Interviews with participants from South Pentecost substantiated the third overarching theme, that most of the outputs of the PPTP which were set to be completed by 2014 have not been implemented in South Pentecost. This lack of implementation was identified by many internal participants and external interviewees as a major roadblock to sustainable tourism development in South Pentecost. Such outputs consist of infrastructure upgrades to Bay Homo jetty and Lonomoroe airport; and roads from the airport to villages in the South; establishment of airport information centres and booking centres; training in tour guiding, interpretation and development of products; micro-enterprise development; and assistance for landowners to form a network aimed at cooperative learning approaches (PPTP, 2011).

At a national level, the Ministry of Agriculture, Trade and Tourism in Vanuatu in close collaboration with the other governmental ministries and regional and international partners such as the Technical Centre for Agricultural and Rural Corporation (CTA) and the Inter-American Institute for Cooperation on Agriculture (IICA) are setting policy to refocus policy objectives to strengthen and advance key linkages between tourism and agriculture in Vanuatu (IICA, 2015). The Minister of Agriculture, Matai Seremaiah, recently put forward agritourism as an ‘excellent opportunity, not only for broadening our tourism base by diversifying the visitor experience, but also offers the potential for sustainable and healthy farm experiences and eating healthy food’ (Harvey, 2016, p. 1). Ena Harvey from the IICA sees the potential for linkages in agriculture and tourism to stimulate new markets and product development while also providing opportunities to develop visitor attractions and distinctive tourism destination brands (Harvey, 2016).

Strategy to support sustainable livelihoods, food security and conservation goals
Supported by the findings, agroecological tourism is put forward as a strategy for fostering sustainable livelihoods, food security and conservation goals to benefit rural smallholders. An increasing number of internal participants were partaking or expressing interest in locally owned sustainable tourism development that can complement their agricultural practices. Various scholars have called for new forms of tourism that can bring the greatest benefits to all stakeholders while not causing social and ecological damage (Ashely, 2000; Goodwin, 2001; Krippendorff, 1982). Indeed, the importance of context and scale is increasingly recognised in achieving appropriate and sustainable development that has positive long-term outcomes (Christensen & Mertz, 2010; Gough, Bayliss-Smith, Connell, & Mertz, 2010).

Studies on smallholder farmers in rural areas elsewhere highlight that agritourism at the smallholder scale and with an environmental focus has the potential to contribute positively to food security, to further develop and diversify traditional crops, to support natural, historical and cultural resources, to strengthen communities and to reduce urban migration (Bwana, Olima, Andika, Agong, & Hayombe, 2015). How the concept of agritourism can best be applied in a developing country context such as the South Pacific with its distinctive socio-cultural, environmental, policy and land tenure context, however, remains as a critical gap in conceptual understanding as well as in policy and practice. Wyporska and Mosiej (2010) suggest that agritourism activities should enable the multifunctionality of rural smallholders, while creating sustainable livelihoods both socially and economically. However, the literature surrounding agritourism has done little to ensure the links between tourism and agriculture consider sustainability and conservation of resources.

The application of both agroecological principles and sustainable tourism principles to agritourism is important if agriculture and tourism are going to co-exist synergistically and generate economic, social, ecological and cultural benefits. Agroecological tourism differs from agritourism in that it is a shift from tourism based on conventional agriculture to tourism which seeks sustainable farming systems which protect and enhance the farm’s natural resources. Agritourism is defined as a ‘strategic economic activity that could engage rural communities in a mix of activities that provide food-related products and leisure within the productive agricultural property’ (Little, 2006, p. 10). The extra dimensions in agroecological tourism is the provision of education or interpretation, involving appropriate returns to local communities and meeting long-term conservation goals, which are considered to be crucial tenets of ecotourism (Allcock, Jones, Lane, & Grant, 1994; Ham, 2001).

Findings demonstrated that many smallholders were still implementing traditional farming practices such as irrigated water taro which is a staple food that has been cultivated in Vanuatu since ancient times (Walter & Lebot, 2007). In 2002, the Food and Agricultural Organisation of the United Nations
(FAO) started the Globally Important Agricultural Heritage Systems (GIHAS) initiative to establish recognition for the conservation and adaptive management of traditional agricultural systems such as these traditional agricultural farming systems (FAO, 2009). Raising the profile on these traditional agricultural farming systems may help encourage tourists to seek them out for their cultural significance (Timothy & Boyd, 2003).

Developing tourism activities around the unique traditional gardening systems found in Vanuatu such as the water taro can be seen as moving from tourism based on conventional agriculture to agroecological tourism where tourists are specifically seeking out traditional farming systems which apply the principles of agroecology. Over the last decade, agroecology has evolved from its foundations of ecology and agronomy to encompass a social movement with a focus on ‘the ecological foundations of the traditional farming systems in developing countries’ (Gliessman, 2015, p. 29). With this transition has come the connection between agroecological research, sustainable agriculture and conservation (Altieri, 2002; Altieri et al., 2011; Gliessman, 2007; Vandermeer, 2009). Synthesising the principles of agritourism and agroecology places importance on sustainability and cultural awareness and could therefore be defined as agroecological tourism that has a primary focus on the interpretation and education of sustainable traditional agroecosystems which exhibit cultural and heritage significance.

For example, co-ordinating an educational tour of the water taro gardens (in addition to the organic farming of tropical fruits and vegetables) with the various traditional methods of preparing taro and other produce grown here could make an exceptional tourism product which would interest cultural, gastronomic, agro and eco-tourists. The United Nations have begun to inscribe traditional agricultural systems displaying significant ancient traditional knowledge such as those found in South Pentecost as World Heritage Sites (Ngidlo, 2011). This has prompted the Vanuatu Cultural Centre to look into listing water taro gardens as World Heritage. This provides opportunities for rural Ni-Vanuatu smallholders to develop interpretive-based products, both passive and active, of the cultural significance and uniqueness of their farming systems. At this time there are only a small number of interpretive tours in Vanuatu that are based on traditional gardening systems and traditional food preparation providing multisensory experiences through culinary tourism (Fansa Farm Foodie Tours and The Summit) (FFFT, 2016, The Summit, 2014). Yet, it is difficult to find examples of these types of tours operated by rural smallholders in Vanuatu.

A range of diversified income streams and traditional practices (such as subsistence and commercial farming, animal production, performance and handicrafts) could be incorporated to further promote rural smallholders to develop small-scale tourism businesses such as agroecological tours and
accommodation. Diversifying in this way could protect rural Ni-Vanuatu smallholders from the volatility and unpredictability of the tourism industry. Positive outcomes could lead to increased disposable income, enhancing preservation of cultural knowledge and promoting more sustainable agricultural practices.

For rural smallholders to develop agroecological tourism as a product, support would be needed to assist smallholders to strengthen and reinforce communication to tourists of the agroecological tour and enhance the overall experience. Interpretation could include the value of a particular food product, the importance of smallholder farming to the South Pacific, or even what the tourist can do to support sustainable agriculture in their home country. Multisensory experiences might be as simple as smelling and tasting produce. Resource- and place-based messaging for interpretation principles may require greater understanding and engagement with the tourists’ background, for example, discussing what sort of gardens they have at home, where they source their food from, how they prepare their food, and making connections with what they are seeing and experiencing on the farm.

This could include both pre- and post-visit communication with tourists that provides an educational experience on traditional gardening and food preparation and the importance of these practices via websites and social media. Agroecological tourism in addition to other strategies based on the principles of agroecology can inform policy-makers and development bodies to address the economic systems that have long disadvantaged a vast majority of rural smallholders.

Conclusion

There has been very little research that has implemented agroecology and sustainable livelihoods to analyse tourism and its contribution to smallholders’ livelihoods. This study recognises the complexity between tourism and sustainability and understands that tourism does not operate in isolation. More specifically, an examination for the potential of agroecology models to enhance the synergies between tourism, conservation and traditional agroecosystems with the wider food network has been presented.

An analysis of rural Ni-Vanuatu smallholders livelihoods located in Bay Homo CCA, South Pentecost identified that increased engagement in the cash economy was causing a shift from traditional gardening systems to more intensified monoculture cultivated systems for dryland taro and kava production. This transition was leading to increased deforestation of the newly formed Bay Homo CCA through slash and burn techniques. To counteract the threats to the Bay Homo CCA, promotion and encouragement of traditional agricultural practices are suggested, including integrated use of cash
and staple crops, trees, extended fallow times and natural rain feed irrigation producing extremely sophisticated techniques for irrigated taro gardens.

Various forms of niche tourism activities such as agritourism and ecotourism have been advocated to integrate conservation and development goals in rural areas of Vanuatu. Yet, there are deficiencies in these forms of tourism in addressing the complexities surrounding agriculture, conservation and tourism in rural areas of Vanuatu. Agroecological tourism was put forward as a strategy to promote traditional farming systems that support ecosystem services provided by the Bay Homo CCA. Agroecological tourism is differentiated from agritourism in that its primary focus is on sustainable traditional agroecosystems to replace tourism activities based on conventional, often mono-cultural, agriculture. The authors defined agroecological tourism as having a primary focus on the interpretation of sustainable traditional agroecosystems which exhibit cultural and heritage significance. Agroecological tourism could complement traditional agricultural systems and conservation areas while improving biodiversity in the Bay Homo CCA and enhancing rural Ni-Vanuatu livelihoods.

A key limitation for this study was a scarcity of empirical data to support many of the concepts that were put forward. There were also constraints in the geographical spread of the study. While limiting the study to one geographical area does enable a deeper understanding of the context, it is important not to assume that this is relevant to rural smallholders in other locations. Further research is needed on the applicability of the ASRLF framework to other developing regions. While agroecological tourism has potential value-adding characteristics for rural smallholders, this is a very new concept. Therefore, this paper recommends further research to customise such applications to their political, economic and socio-cultural contexts.

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