Sustainable Livelihoods in the Pacific Islands: the case of Levuka, Fiji

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Abstract

This study focuses on the small town of Levuka, Fiji, which is reliant on a single company, the Pacific Fishing Company (PAFCO), as its main source of monetary income and livelihood. PAFCO has an unstable history of periodic temporary closures, for a variety of reasons, with the most lengthy close occurring between June to November 2011. This event was a huge shock to community livelihoods, and made clear their reliance on the factory, and resulting vulnerability.

This study aims to analyse the impact of economic shock on a settlement community in Levuka, and the coping strategies they employed, in order to present sustainable livelihood recommendations. To do this, the study firstly utilises secondary data to identify the key disadvantages facing Pacific islands, and the areas in which the region requires assistance in achieving sustainable livelihoods. The study identifies smallness, remoteness, vulnerability to external shocks, governance, demographic and climate as issues facing Pacific islands, and the areas in which they require specific livelihoods support as human assets - skills, migration and information; social assets – culture and gender; physical assets - land ownership, agricultural support, infrastructure and access to market; natural assets - planning and management; and financial assets – credit and financial literacy.

Primary data from a field visit to Levuka in June 2012, using semi-structured interviews and focus group methods, aims to then investigate the impact on livelihoods of an economic shock in Levuka, and to identify both the positive, potentially unsustainable and negative coping strategies employed by the Levuka community. This data is analysed, using a sustainable livelihoods model, in order to present recommendations for both the creation of, and support for, sustainable livelihoods in Levuka, to reduce their vulnerability to future shocks should PAFCO close again, or permanently.

The resulting recommendations seek to support the community’s ability to meet basic needs, build assets, and to access resources, as well as to minimise the negative, and promote the positive, coping strategies. The recommendations are: Improve livelihood opportunities for women; Skills improvement especially for youth population; Improve access to markets for agricultural produce; Improve access to both formal and informal financial services; Encourage sustainable use of natural resources; Reduce barriers to using land as an economic asset.
Statement of Originality

This thesis is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by explicit references.

Signed……………………………. Date …………………………

I hereby give consent for my thesis, if accepted, to be available for photocopying and for inter-library loan, and for the title and summary to be made available to outside organisations.

Signed……………………………. Date …………………………

Statement of Ethics Review Approval

This dissertation involved human participants. A Form E1BE for each group of participants, showing ethics review approval, has been attached to this dissertation as an appendix.
Acknowledgements

I would firstly like to thank the community of Levuka for kindly giving their time to answer my questions, for being endlessly interested in my studies, for taking me into their homes for the duration of my many stays and for doing all this with great humour. You have all taught me so much, vinaka vakalevu.

My supervisor, Supriya Akerkar, has been a great guide through this process, giving constructive criticism, easy to understand direction, and gave her time so generously.

To my family – Elaine, Terry, Jack, Lynda and Carol – thank you for supporting me in so many ways over the last two years of this course, and for taking me in when I was a poor homeless student... I promise I’ll go and get a job now!

And finally a big thank you to all my friends and lecturers who have been a wonderful source of learning for the last two years, making a great course even better. I wish you all the very best in the future.

If I’ve learnt nothing else, it is to never start a sentence with ’When I was working in...’.
### Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AOSIS</td>
<td>Alliance of Small Island Developing States</td>
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<tr>
<td>BPoA</td>
<td>The Barbados Programme of Action</td>
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<tr>
<td>CARE</td>
<td>CARE International</td>
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<tr>
<td>DFID</td>
<td>UK Department for International Development</td>
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<tr>
<td>ESIN</td>
<td>European Small Islands Federation</td>
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<tr>
<td>FFA</td>
<td>Pacific Islands Forum Fishing Agency</td>
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<td>FNPF</td>
<td>Fiji National Provident Fund</td>
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<tr>
<td>FSPI</td>
<td>The Foundation of the Peoples of the South Pacific International</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>HLS</td>
<td>Household Livelihood Security Model</td>
</tr>
<tr>
<td>IFRC</td>
<td>International Federation of Red Cross and Red Crescent Societies</td>
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<tr>
<td>LMMA</td>
<td>Locally Managed Marine Area</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
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<tr>
<td>PAFCO</td>
<td>Pacific Fishing Company</td>
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<tr>
<td>PIFS</td>
<td>Pacific Islands Forum Secretariat</td>
</tr>
<tr>
<td>SDC</td>
<td>Swiss Agency for Development and Cooperation</td>
</tr>
<tr>
<td>SIDS</td>
<td>Small Island Developing States</td>
</tr>
<tr>
<td>SL</td>
<td>Sustainable Livelihoods</td>
</tr>
<tr>
<td>TFL</td>
<td>Telecom Fiji Ltd</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<tr>
<td>UNDESA</td>
<td>United Nations Department of Economic and Social Affairs</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational Scientific and Cultural Organisation</td>
</tr>
<tr>
<td>UN-OHRLLS</td>
<td>United Nations office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
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Chapter 1 Introduction and Background

1.1 Background to the Study

This study focuses on the town of Levuka, on the island of Ovalau, Fiji. Levuka's beginnings in 1830, as the Pacific's first permanent European settlement, and later in 1874 as Fiji's first colonial capital, were of a thriving town with businesses, effective law and order, and Fiji's first school (Connell and Lea, 2002). A few years later, due to concerns over limited expansion space, Fiji's capital moved to Suva on the mainland of Viti Levu, and Levuka's fortunes have declined ever since (Fisher, 2003). Despite Levuka's charm, with a main street of colonial buildings and a rich history largely unchanged since the 1880s, the poor investment in infrastructure, its geographical isolation, and lack of Fiji's famous beaches have done nothing to improve Levuka's prospects (Harrison, 2004; Takano, 2008). The end of Levuka's Copra industry in 1956 caused an economic crisis, with young people moving to Suva for work, shops closing, swathes of the European population leaving, and everyone else struggling to secure livelihoods (Fisher, 2000; Rajan, 2005). Harrison (2004 citing Weavery 1998) states that Ovalau is a 'periphery of a periphery', and that Levuka is even more marginal, despite it being the administrative centre for Fiji's Lomaiviti and Lau provinces.

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1.1.1 The Pacific Fishing Company (PAFCO)

Levuka's economy was given the boost it needed through the opening of a fish freezing plant by the Japanese government's aid programme in 1963, which was, seven years later, turned into a value adding cannery, with a monopoly on Fiji's export of canned tuna - the Pacific Fishing Company (PAFCO) (Emerson-Bain, 1997; Fisher, 2000; Rajan, 2005). Due to poor performance and a decline in the company's profitability, the Japanese partners withdrew in 1987, leaving the Fiji government as the main stakeholder. PAFCO has come close to closing a number of times due to a lack of fish and other variables, despite injections of aid (Emerson-Bain, 1997).

In 1997 Bumblebee Seafoods, a US tuna processing and marketing company, took over the management of the factory, providing the tuna from their suppliers, along with expertise and market access, and the company has since been fairly consistently profitable. In 2009 PAFCO won three awards at Fiji's TFL Exporter of the Year ceremony, a surprising result for a rural-based company (Fiji Government Online, 2009). PAFCO now employs around 1000 people of a total island population of 8000 (employment in other sectors is low, mainly government positions) and, when operating, injects over F$60,000 into the local economy through wages, and is by far the main source of cash income for the islanders (Fisher, 2000; Harrison, 2004).

Since the high of 2009, the workers of PAFCO have suffered intermittent closures, and reduced work weeks, with management giving little, if any, notice to workers. PAFCO has what could be called a 'captive' labour force with a weak bargaining position, of whom 80% are women, and for each employee another four (family members) are affected by that job (Arama and Associates 2000; Tuara Demmke 2006). Health related concerns were the cause of the most lengthy closure of the factory facility in 2011 which affected the tuna loin production, with 800 workers unemployed from June to November (Baselala 2011; FFA 2011; Nasiko, 2011). Although Levukas' dependence on PAFCO is well known, this extended closure, with no forewarning from management, served to bring home the extent to which the island's (and surrounding islands') livelihoods are on the line should PAFCO cease to operate (Arama and Associates 2000; Harrison 2004; Hewitt et al 1999; McCutchan 1997; Nadore 1996; Rika 1997; Takano 2008; Tuara Demmke 2006). This closure, and concerns around Levukas' dependence on PAFCO, is the rationale for this dissertation.
On 27th June 2012, the day the researcher left Levuka, the Management Committee of PAFCO convened to advise the workers that a decision had been made to move the tuna loin production (the department that employs 80% of the workforce) to the capital city, Suva. All workers who will be affected have the option to continue their employment with PAFCO in Suva, or to lose their jobs (personal comm. with PAFCO worker). With this new information, the significance of the study is clear, and a renewed urgency for recommendations and action to support sustainable livelihoods in Levuka is needed.

![Levuka Town](Levuka_Town.jpg)

**Photo 1: Levuka Town**

### 1.1.2 Why Levuka?

The dissertation topic stemmed from the researcher having spent time in Levuka, Fiji in 2008. During that time it was clear that the town (and the island) was dependent on one main employer, PAFCO, and that this was unlikely to be sustainable in the long term due to a lack of alternative livelihood opportunities available outside of subsistence farming. A further visit in the summer of 2011, at the time of the five month closure, confirmed that the workers of PAFCO, their families and local businesses were indeed economically vulnerable and ill prepared. During those months the researcher witnessed the impact on the Levuka community, but also the coping strategies they employed in response to the livelihood shock of the closure.

Levuka representatives put in a bid for UNESCO World Heritage Status a few years ago, with the anticipation of increased tourism and economic opportunities (Takano, 2008; UNESCO, 2001).
The plan developed by UNESCO (2001) includes a strategy to increase tourism in Levuka and Ovalau, as a supplement to the islands dependence on PAFCO, although recent attempts to increase tourism have failed to create the promised jobs for the resident population (Fisher, 2003). Many local people fail to see how the UNESCO status would benefit them, and livelihood activities separate from this bid and PAFCO need to be found.

The researcher decided that this dissertation offered an opportunity to provide recommendations for sustainable livelihoods in Levuka, based on an understanding of the issues of small, peripheral, islands and the areas in which they need support, and an analysis of the closure's impact and the coping strategies employed.

1.2 Research Aim
To analyse the impact of a livelihood shock in Levuka, Fiji, and the coping strategies employed by the community, in order to present sustainable livelihood recommendations.

1.3 Research Objectives
1. To identify the key disadvantages facing Pacific islands and the areas in which the region requires assistance in achieving sustainable livelihoods.

2. Investigate the impact on livelihoods of the economic shock in Levuka.

3. Identify both the positive and negative coping strategies employed by the Levuka community.

4. Present recommendations for both the creation of, and support for, sustainable livelihoods in Levuka.

1.4 Research Significance and Scope
With no other investigations into the impact of the PAFCO closure on the Levuka community, the significance of this study for the communities is evident. This study will enable recommendations to be made based on real life concerns in Levuka. Examining the wider

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2 With Fijian culture being based around the Vanua (land), preservation of the buildings would not increase Levuka’s significance, in their view. Levuka’s value is here with or without the buildings.
context of disadvantages faced by Pacific islands is also significant, as they face a unique set of challenges to other developing countries.

The recommendations made as a result of this study will be applicable to the Levuka case study specifically, but lessons could to some extent be transferable to other small island contexts. There are also a number of issues relating to PACFO and its treatment of workers, which came out in the research, and although these reports are of great concern, it is not within the scope to delve into them. Issues surrounding the environment and climate change are the current focus of discourse around small islands, and they will be mentioned briefly, but to investigate fully how climate change will impact sustainable livelihoods in Levuka is out of the scope of this paper.

1.5 Outline and Structure

Chapter 1 outlines the topic of the dissertation, firstly by providing an introduction to the case study of Levuka, then stating the aim, objectives and research questions, along with the study’s significance and scope.

Chapter 2 presents the research methodology including the analytical framework, primary and secondary research tools, the research limitations and ethical issues.

Chapter 3 is a literature review of the concepts underpinning the study including sustainable livelihoods, assets, culture, vulnerability and coping strategies.

Chapter 4 introduces the wider issues facing Pacific islands, from larger scale disadvantages and challenges to support needed at the local level (Objective 1).

Chapter 5 presents the impact (Objective 2) and coping strategy (Objective 3) findings from the data collection in Levuka, Fiji.

Chapter 6 is the discussion of the Levuka data, critically discussing the related literature from Chapters 3 and 4, drawing conclusions and making recommendations for moving towards sustainable livelihoods in Levuka, Fiji (Objective 4).
Chapter 2 Research Design and Methodology

2.1 Research Design

A research design is how the research questions are logically translated into data to be collected and conclusions to be drawn (Bryman 2012, Yin 2009). With this research being based around a specific town, facing a specific issue, the researcher decided to use the single Case Study Design. This decision was confirmed for the researcher when reading Yin (2009) which stated that this design would be appropriate “...if you wanted to know how a community successfully overcame the negative impact of the closing of its largest employer...” (p9).

2.2 The Analytical framework

With the aim of both designing the primary research tools, structuring the study, and analysing the primary data in a methodical, logical, and rigorous way, the researcher chose to combine the case study design with an analytical framework. Sanderson (2000, 2012) presents CARE's Household Livelihood Security (HLS) Model (Figure 2), which was chosen as appropriate to investigate and analyse the complexity of livelihoods in Levuka. The model sees assets as a means of reducing vulnerability, and this is where it proved extremely useful in designing the primary research, with assets becoming the themes for the primary data questions, and to provide structure when discussing in which areas Pacific island livelihoods need support.
The framework is cyclical, showing how peoples' ability to meet basic needs, build assets and access resources are all linked, and all potentially vulnerable to external shocks. These three areas are used to analyse both the impact of PAFCOs' closure (the external shock) on the community, and the coping strategies employed in Chapter 6.

2.3 Research methods

With the researcher having previous knowledge of the community, it was known that the impact of the closure is best captured through a collection of complex experiences, rather than anything quantifiable by a survey or structured questionnaire, therefore qualitative methods were employed to meet objective 3. This section will firstly discuss the lessons learnt from an initial pilot study, then at the primary data collection methods, which include semi-structured interviews, focus groups and key informant interviews, and finally at the sources of secondary data.

2.3.1 Pilot study

A basic questionnaire was tested by five participants in Fiji, who had been affected by the PAFCO closure. One result from this exercise caused a rethink of the research methodology - people in the background were repeatedly prompting the participant with other answers, and wishing to participate themselves. In Fijian culture, private conversations are often seen as somewhat rude with day to day life a collective 'shared' community experience rather than a
purely individualistic or household one. It would be more appropriate to understand how people were impacted and coped with the closure together.

2.3.2 Primary research

The field study took place in June 2012, in a small settlement\(^3\) behind Levuka Town. This settlement was chosen as the research site as the researcher had personal contacts there, and all households were affected by the PAFCO closure. The researcher used semi structured interviews (10 participants), three focus groups (30 participants in total) and key informants (3 participants) (see Appendix 2 for list of participants) to gain a deeper knowledge of how the community understood the impact and what coping strategies they employed.

Semi-structured interviewing is favoured in qualitative research as it allows an intensive examination (Bryman, 2012), particularly useful in a case study design. This is where the HLS model as an analytical framework was key in designing the interviews by using a set of guiding themes - Social, Financial, Physical, Natural and Human Assets - to assess the impact of the closure and what coping strategies were employed\(^4\). Participants were selected from the researchers’ personal knowledge that they had been unemployed during the closure, and attempts were made to make sure there was diversity in the gender, age and household make up (see Appendix 2). Due to the collective experience of the closure, focus groups were chosen as an additional method. This allowed an insight into how the community had collectively coped during the closure, and the social relationships in the settlement. The discussions were based around the same asset themes above, but were less structured, allowing a conversation around the issues to develop.

The decision to use key informants was made to triangulate the information gathered from the interviews and focus group discussions, and to clarity anything that was unclear to the researcher. All key informants were personal contacts of the researcher, chosen due to their knowledge of the community, and for having a valuable perspective.

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3 The difference between a village and a settlement is as follows: a village has a chiefly hierarchy and communal land ownership, whereas a settlement has neither of these and is simply an area of land in which people have settled despite having no ownership rights.

4 See Appendix 1 for topics of Semi-structured Interviews and Focus Groups
2.3.3 Secondary Data Collection

Secondary data was used to meet research objective 1 and for the literature review of concepts, such as livelihoods, vulnerability and coping strategies upon which the study is based. A range of secondary sources were used such as literature searches, both online and in the library, journal articles, websites, NGO reports, UN agency reports, newspaper articles, and books.

2.4 Research limitations

The researcher also found that the interviews took longer than anticipated to complete, so less people than expected took part. Also, due to no NGOs working in Levuka and other Fiji based NGOs having limited knowledge of the case study, the researcher was unable to extend the key informant interviews to development practitioners. Politics is a sensitive issue in Fiji, with a military government in power and a string of recent coups. Local contacts advised that delving too deeply into political issues surrounding the case study in the current climate could arouse negative interest from the authorities. Personal bias was something that the researcher was keen to be aware of, and a leaning towards the negative impacts in Levuka was balanced by actively seeking the positives. Other potential challenges were limited due to the researchers' prior knowledge of the community, culture, and with English being the 'official' language of Fiji (alongside Fijian and Hindi).

2.5 Research Ethics

Ethical concerns were applicable to objectives 2 and 3 of the study and the researcher made it clear that participation in all discussions and interviews was voluntary and consent was always taken beforehand. A decision was made before the field research to make all identifying details of participants confidential, due to the nature of case studies taking an intensive view of personal opinions and circumstances, and therefore all names provided are pseudonyms.
This section aims to lay out the dissertation’s conceptual basis, providing an understanding of the literature that forms the background to the objectives of the study. The dissertation seeks to provide recommendations for sustainable livelihoods in Levuka, Fiji, through an investigation into the impact of the PAFCO closure on the community, and the coping strategies employed as a result, using the sustainable livelihoods model as an analytical framework. This section will therefore firstly discuss the literature on sustainable livelihoods, assets and associated models. Secondly, in order to understand sustainable livelihoods in the Pacific context, culture will be briefly discussed in relation to the SL framework. Lastly, to give some background to the identification of coping strategies in Levuka, the literature on vulnerability and coping strategies is introduced.

3.1 Sustainable Livelihoods, Assets and Frameworks

Chambers and Conway (1991, p6) state that put simply, a livelihood is the means of gaining a living, and that a livelihood is made up of people (capabilities i.e. what they are capable of doing and being (Sen, 1993, 1997)), activities (what they do), assets (what they have), and outputs (what they gain from what they do). Sanderson (2000) makes additions to this by describing as key how people obtain ‘assets’, what they do with them, what gets in their way and who controls the resources upon which assets are based. It is important to note that the livelihood approach sets off looking at what people have, rather than what they are missing.
This approach stems from Sen's (1993, 1997) work on capabilities — “...assets are identified as the basis of agents' power to act, to reproduce, to challenge, or change the rules that govern the control, use and transformation of resources” (Moser, 2006, p8).

Assets are therefore key to understanding the livelihoods discourse. Assets can be tangible or intangible, and generally accepted are the five main asset groups — financial, social, physical, natural and human, with others including political assets that are increasingly being used — “…that can be acquired, developed, improved and transferred across generations” (Ford, 2004 cited in Moser, 2006, p5). It is useful to look at these briefly to understand what would be associated with each asset category (although there are many overlaps). Usually, the less assets you have, the more vulnerable you are, and conversely, the more assets you have, the more resilient you are (Sanderson, 2012).

<table>
<thead>
<tr>
<th>Non-tangible assets</th>
<th>Tangible assets</th>
</tr>
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<tbody>
<tr>
<td>Human: Investments in a person determining their ability to work and returns from that work. Examples are skills and abilities, training, productive resources, land. Examples are shelter, education, knowledge, nutrition and health, physical ability.</td>
<td>Physical: Stock of equipment, infrastructure including water supply, energy and transport, productive resources, land. Examples are shelter, belongings, tools, goods, tradable items, technology.</td>
</tr>
<tr>
<td>Social: Rules, norms, obligations, reciprocity, and trust at the household, community, formalised institutional, political and civil society systems — a person's relationship with other people and the mutual assistance upon which they can draw. Examples are networks, social groups, family ties.</td>
<td>Financial: Financial resources available to buffer against selling productive assets or the use of a negative coping strategies i.e. prostitution. Examples are savings, cash, remittances, credit, insurance.</td>
</tr>
<tr>
<td>Political: The ability to have a voice in the political system and decision making processes. Examples are organized groups for change</td>
<td>Natural: Stock of environmentally provided assets. Examples are water, land, environment, soil, forests, wetlands, minerals, use of common property resources.</td>
</tr>
</tbody>
</table>

Table 1: Tangible and Non-tangible Livelihood assets: Adapted from IFRC (2004), Moser (1998, 2006) and Sanderson (2012)
The temporary closure of PAFCO showed the insecurity of the island community’s main income source, and this study focuses on how to create sustainable livelihoods. Ashley and Carney (1999, p8) state that there are different interpretations of sustainable livelihoods, and although describing what a sustainable livelihood is in a sentence or two is useful as an introduction, it cannot reflect the complexity and diversity of people's livelihoods, but could be seen as a goal or an ideal state to be achieved (Cahn, 2006; Chambers, 1997). Chambers and Conway (1992) define a livelihood as sustainable when it “… can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation…”.

The sustainable rural livelihoods model (Figure 3), developed by Diana Carney (1998) and used extensively by DFID, has been extremely influential in developing the understanding of livelihoods (DFID, 2000). The model provides a means of analysing the causes of vulnerability (such as shocks), the household assets, what livelihood strategies are employed, and the livelihood outcomes (i.e. the goals to which people aspire), by focusing on people and their priorities (Ashley and Carney, 1999, Farrington et al, 1999).

![Figure 3: DFID Sustainable Rural Livelihoods Model](http://www.poverty-wellbeing.net/media/sla/docs/2-1.htm)
Sanderson's (2012) livelihoods model (Figure 4) sets an analysis of people's assets (financial, social, human, political, physical) within a cycle of access to 'resources' (determined by discrimination and controls), how people build their assets, which external shocks they are vulnerable to, and the ability to meet basic needs. The advantages of this model is that it includes a fuller picture by including political assets, is more user friendly than the DFID model, is easily understandable and more practical and flexible to be used for a variety of livelihood assessments.

Figure 4: Household Livelihood Security Model

Due to the researcher's familiarity with the Sanderson model, and its 'filling in' of some gaps in the DFID model, this was chosen as an analytical framework for the study (see Methodology chapter). Specifically, the researcher has used the three sections of the framework – the ability to meet basic needs, to build assets, and to access resources – as a way of categorising and analysing the data gathered around the impact of the economic shock of PAFCOs closure, to formulate recommendations and conclusions.

3.2 Culture and Livelihoods

Culture can be broadly defined as identity, relationships, beliefs and values, art and crafts, cultural norms and customs, language and interactions (Cahn, 2006; FSPI, 2007). Culture is powerful, influential and complex, and is rarely found in sustainable livelihood models despite influencing all areas of livelihoods and could therefore be seen as the environment within which livelihoods exist (Cahn, 2006). Poverty is experienced in the Pacific islands, but is often described as 'hardship' as there is an expectation that customary and traditional systems will provide for families, but this is often not the case (Cahn, 2006; Ward and Yeoman, 1997).
Although this paper will not have cultural assets as a separate group (FSPI, 2007), it will appear as a social asset and references to it will be made throughout the following chapters.

3.3 Vulnerability and Coping

As discussed above, the livelihood model takes into consideration peoples' vulnerability to shocks (sudden and unpredictable events), such as the loss of a job in the Levuka context, and stressors (continuous and predictable pressures), such as declining fish stocks (Chambers and Conway, 1991; ELDIS, n.d.). The ability to 'cope' with and recover from stress and shocks is a key determinant of a sustainable livelihood as shocks can completely wipe out certain assets, and in other cases can force people to dispose of or abandon them (Cyrulnik 2009; Davies, 1996; Grotberg 1997; Osborn 1993; Rutter 1981). Chambers and Conway (1991) state that “Sustainability is thus a function of how assets and capabilities are utilised, maintained, and enhanced so as to preserve livelihoods” (pg9), so the ways in which people manage their assets in response to shocks are called coping strategies (Moser, 1998).

Coping strategies can be defined as positive and negative, and many shades in between. Negative coping strategies could involve the sale of productive assets (livestock, tools or machinery), or getting involved in illegal activities such as prostitution. Having a wide portfolio of accumulated assets can help to limit the need to engage in these strategies, to 'bounce back' quicker and to effectively meet basic needs (Ellis, 2000; Moser, 1998; Payne and Lipton 1994; Scoones 1998). The variety of coping strategies, mostly theorised in the literature on food security, are neatly summarised by Chambers and Conway (1991, p11): reduce consumption for a stint; hoard; protect asset base; deplete assets; diversify food/work/income sources; claim from others; move or migrate.

Despite the classifications above, measuring coping strategies is not easy as “...the poor are strategic managers of complex asset portfolios” (Moser, 1998, p5), and simplified indicators cannot capture this usefully (Moser, 2009). Moser (1998) developed the Asset Vulnerability Framework to illustrate the asset 'stocks' that poor households accumulate or lose during a period of economic crisis, and to answer some key questions: What risks poor households take in order to withstand prolonged uncertainty? How do households diversify their assets, minimise vulnerability and prevent asset erosion? Are some assets more finite than others? (p5).
3.4 Chapter Conclusion

Assets, and their interaction, are key to understanding livelihoods, and how assets are managed in the face of shocks (coping strategies) is how one can assess whether a livelihood is sustainable. Although no framework can fully capture the complex reality of livelihoods in all circumstances, they provide a useful framework within which to assess and analyse, and will be utilised in Chapter 6 to make recommendations for Levuka. The next chapter utilises the asset categories to help identify the areas in which the Pacific islands require assistance in achieving sustainable livelihoods.
Chapter 4 Pacific Islands

4.1 Small Island Developing States (SIDS)

The Pacific Islands are categorised as part of the 'Small Island Developing States' (SIDS), a group of developing countries that share common key characteristics and face serious disadvantages (UN-OHRLLS, 2011).7

“Small islands are microcosms for our world... If we can find solutions to the special vulnerabilities of islands, it will help us address more global problems... ‘Small islands, big issues’ was the slogan we used for the Barbados Conference in 1994. That sentiment remains just as true today.” Kofi Annan, Former Secretary General of the United Nations (Source: ESIN, 2008)

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7 There are differing definitions of SIDS between organisations (even within UN departments), with some being small islands, but others in the category could be landlocked states, small non-island states, or even non-developing countries (Fry, 2005) UNDESA lists 51 SIDS, including Bahrain and excluding Singapore, whereas UNOHRLLS lists 51 SIDS but includes Singapore and excludes Bahrain.
Significantly, there are international and regional strategies that have recognised the specific challenges of SIDS. The 1994 UN Global Conference on the Sustainable Development of Small Island Developing States held in Barbados was a landmark conference, culminating in the Declaration of Barbados and the Programme of Action for the Sustainable Development of Small Island Developing States (BPOA) (Hein, 2004; UN, 1994). Mauritius held the “Barbados +10” international meeting in 2005 (UN, 2005), adopting the Mauritius Strategy, and endorsing the BPOA as a blueprint for the sustainable development of SIDS (SIDSNET, n.d.; UN-OHRLLS, n.d.), “...the only global strategy to address specifically and exclusively the problems of island states.” (UNDP, 2005). The Mauritius Strategy provided additional areas for specific attention, totalling 20 broad headings under one of five categories – natural resource and environmental threats; economic issues; governance; social issues; implementation (UNDP, 2005). Regionally, the Pacific Plan is a strategy developed for cooperation in the region focusing, for all intents and purposes, on the same issues addressed in the BPOA (PIFS, 2007).

The future prospects of SIDS are generally considered to be bleak (Gough et al, 2010). Decisions made on the global stage, around issues such as world trade and climate change, have big impacts on the communities and individuals of small islands (Hein, 2004), but have “...failed to translate.....into island-specific support” (Ouane, 1995: vi). Although some authors (Easterly and Kraay, 1999) have argued that small states on the face of it are doing rather well economically, and should therefore receive the same policy recommendations as all other developing states, there is a wider literature, as well as the international strategies above, arguing that small states do indeed face specific disadvantages, and that specific support to secure sustainable livelihoods is required.

4.2 The Pacific Islands – Key Challenges

Pacific island states face a number of disadvantages on a macro scale, including small size, remoteness, governance limitations and political instability, demographic issues, and environmental factors. These factors combine to create disadvantages for private sector investment, and help to explain the factors that are causing export companies like PAFCO to withdraw from peripheral areas.

Smallness, both economically and physically, is a key disadvantage for Pacific islands.
Economically, their limited size and make up of a number of scattered islands, leads to:

- Small and vulnerable economies;
- Reliance on international trade with little influence over the terms of trade;
- High dependence on foreign exchange earnings (especially from unstable sectors such as tourism);
- A narrow resource base;
- Low economic and export diversity with focus on agricultural and fisheries;
- Reliance on imports with limited options for import substitution;
- Small domestic market and low ability to influence prices,
- Low population numbers with difficulties exploiting economies of scale


Heavy dependence on single industries, usually agriculture and fisheries, or even dependence on an individual company (as in Levuka's case), make islands very vulnerable to decisions and pressures that are out of their control, such as political turmoil, civil unrest, natural disasters, recession, high fuel costs, investor withdrawals, airline closures, food price increases, crop disease, amongst others, which have had wide ranging negative economic impacts and increase unemployment (Anglican Alliance, 2011; Connell, 2010; Rogers, 2008; UNCTAD, 2004; UNDP, 2005).

Remoteness, both internationally and within scattered island states, causes issues most obviously of distance - “Tyrannies of distance have disadvantaged economic enterprise” (Connell, 2010; p119). Access to commercial markets is difficult and costly (Anglican Alliance, 2011; Bass and Dalal-Clayton, 1995; Connell, 2010), with international markets far away, and despite some improvements in air and sea transport in the region (Hein, 2004), time delays and unreliable services cause problems in countries exporting mostly agricultural and fisheries produce. Small product markets, producing relatively small quantities and transporting over large distances, require high cost of transportation per unit compared to other countries (Briguglio 1995, cited in Augustin, 2007).
With decision making on the global stage affecting small islands, governance plays a key role in minimising the negative impacts and to maximise the benefits (Abbot and Pollard, 2004). Public administration has proved to be a problem, with a lack of specialists to tackle development challenges, compounded by issues of allegiances with kin, a lack of impartiality and corruption (Carlston Boucher, 1999; Connell, 2010; Rogers, 2008; UNDP, 2005). Administering to a range of scattered islands, is a challenge (Connell, 2010), and “...few of the rural/outer island poverty alleviation projects have successfully achieved their primary objectives of stemming population drift to the urban centre and raising local living standards” (Abbot and Pollard, 2004; p65). There have also been challenges in developing regional cooperation for economic development (Anglican Alliance, 2011), despite the work of the Alliance of Small Island Developing States (AOSIS). Some governments have made risky investment decisions, such as financing loss making air and shipping lines, fishing and hotel operations. This creates burdens on local tax payers and has a negative impact on growth (Abbot and Pollard, 2004).

Demographic indicators, including health, education and gender equality are generally good, but mask variations within states, with outer islands and rural areas much lower (Abbot and Pollard, 2004). Populations are small, but population make up, specifically multiculturalism, has caused tension in some states (particularly Fiji). High levels of unemployment in the formal sector, and the integration of young people and women, especially those will low skill levels, is a challenge (Anglican Alliance, 2011; Bass and Dalal-Clayton, 1995). Data predicts that only around a quarter to a third of school leavers will be able to find work in the formal sector, and with rising aspirations, and a lack of interest in traditional livelihood options of fishing and agriculture, are causing a reluctance to take up traditional roles (Abbot and Pollard, 2004).

Island ecosystems are fragile and unique, a benefit of remoteness, but environmental issues including waste disposal, depletion of natural resources due to economic development and the use of coastal environments for tourism activities are increasing the vulnerability of Pacific island communities (Anglican Alliance, 2011; Briguglio, 1995). Pacific islands are particularly vulnerable to cyclones, but they also have to contend with earthquakes, landslides and sea level rise. As recent worldwide disasters, such as Haiti, have proved, development can be set back for years, causing devastating human losses alongside infrastructural damage. The

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8 AOSIS is an ad-hoc lobby within the UN, made up of representatives of small island states. See [http://aosis.info/](http://aosis.info/)
Anglican Alliance (2011) estimates the negative impact of a natural disaster is a continuing 4-7% of GDP, making disaster preparedness a key economic strategy for the Pacific states. Another effect of this vulnerability is high insurance costs, making business in the Pacific islands an expensive enterprise.

All of these macro disadvantages faced by Pacific island states turn into disincentives and barriers for both foreign investment and for domestic private sector enterprise. Support for the domestic private sector, in the form of an 'enabling environment' is key to allowing more people to enter the formal sector successfully and despite discourse promoting it, there is little action (Abbot and Pollard, 2004; Rogers, 2008). To work towards sustainable livelihoods for Pacific island communities, there must be support on a more local level.

### 4.3 What support is needed for sustainable island livelihoods?

Pacific islands have long been viewed as having lifestyles of 'subsistence affluence' (Bass and Dalal-Clayton, 1995), a traditional culture of sharing what you have equitably with your family and clan, but the reality is not this idyllic (Abbot and Pollard, 2004; Gough et al, 2010; UNCTAD, 2004). Monetisation of society is causing a shift in how people carry out their livelihoods and, even in the most remote communities, islanders are increasingly finding that they need to pay for school fees, health services, electricity, communication, and retail goods - all increasingly necessities. Social obligations, that once involved home made goods and food, are increasingly involving money, and with the importance of kin relationships in the Pacific providing vital safety nets for the most vulnerable, this is increasing the demand for cash (Abbot and Pollard, 2004). Livelihoods are about more than just having a cash income, but increasingly this is becoming a priority.

“Much of what is valued in island society remains: shared beliefs and values, strong cultural identities, access to resources through traditional social structures, continuation of agricultural practices and methods of marine extraction, rough equality of material conditions, reciprocity, and a degree of community control over the means of production” (Gough et al, 2010, p7).

The Pacific islands do have a number of strengths upon which they can draw to promote sustainable livelihoods and resilience, including the potential of the youth population and
strong traditional culture (which the BPOA states as key), further potential for tourism development and their proximity to emerging markets of East Asia as well as their relationships with Australia and New Zealand (Anglican Alliance, 2011). As communities strive to achieve sustainable livelihoods they will need to draw on a wide range of assets, including human (skills, gender, migration), social (culture), physical (land ownership, agricultural support, infrastructure and access to markets), natural (asset planning and management) and financial (credit, informal savings) (FSPI, 2012), most of which are likely to require external support. This section draws themes from the literature on Pacific island livelihoods, not claiming to be an exhaustive list, which will be utilised in the concluding chapter to contrast against the primary data gathered in Levuka, Fiji in order to make recommendations.

4.3.1 Human Assets
Despite the high number of school drop outs in the Pacific, the youth population have aspirations beyond making a living from traditional sources such as agriculture and fisheries (Connell, 2010). Improving the level of skills, especially amongst school leavers, is key to achieving economic development in Pacific islands, giving people the opportunity to create, and sustain, a livelihood. Presently the education system is set up to prepare school leavers for white collar government jobs, but the number of these created each year is tiny in comparison to the numbers in need of work (Abbot and Pollard, 2004). A review of the curriculum to include more appropriate training at secondary and post-secondary level needs to be in place to be in line with emerging markets, and skill shortages that face employers and investors (Abbot and Pollard, 2004; Anglican Alliance, 2011). Appropriate training could focus on technical and management areas of agriculture, fisheries and tourism. Fiji has additional strengths in the provision of security and peacekeeping personnel, which could provide skill improving opportunities overseas (Abbot and Pollard, 2004).

Female participation in the workforce has increased but there are variations, with countries in Melanesia, like Fiji, having only a slight increase with 33% of the paid workforce female (Connell and Lea, 2002). Women experience ‘glass ceilings’ (limits on their ability to be promoted) and discrimination, with a variety of occupations effectively for men only, and limits to the extent that women can move outside of current gender roles. The empowerment of

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9 Only 56% of those who started schooling in Fiji in 1988 continued to finish Form 6, and the highest dropout levels are in forms 4 and 5, after the Fiji Islands Junior Exams (Abbot and Pollard, 2004).
women through inclusion in productive livelihood activities, both in traditional areas such as crafts and marketing, and others such as inshore fishing, strengthens household livelihoods.

Another strategy is to encourage controlled labour mobility throughout the region, the benefits of which would be greatest for unskilled workers who would lower poverty at home whilst improving their skills set abroad. Migration is already used by some in the Pacific as a coping and diversification strategy (Gough et al, 2010). Despite concerns about skill drain, migration has enabled the survival of many peripheral islands (Connell, 2010; Gough et al, 2010), but Abbot and Pollard (2004) state that although remittances are certainly an important cushion for households in the face of unemployment, it does little to develop the economies productive base. Migration, combined with diversification of the economy, could provide an alternative development trajectory (Connell, 2010).

“States, individuals and various international agencies have attached increased significance to migration, remittance flows, return migration, and the role of the diaspora, where conventional development strategies have achieved limited success” (Connell, 2010, p116).

4.3.2 Social Assets

“Unsustainable development threatens not only the livelihood of people, but also the islands themselves and the cultures they nurture” (UNDP, 2005, n.p)

The characteristic traditional culture of the Pacific islands, with norms of reciprocity, community obligations including Kerikeri (where one shares their goods with others), the importance of extended family ties, hierarchy and systems of leadership, and communal decision making, all key aspects of day to day life, are a valuable livelihood asset, a source of social cohesion, and provide a safety net against external shocks, resulting in relatively low income inequality, and limiting the extent to which individuals and families experience poverty (Anglican Alliance, 2011; FSPI, 2012). There are, of course, aspects of the culture that restrict the sustainability of livelihoods, such as 'planning ahead' not being a traditional practice, or the limited individual economic use of communally owned resources, such as land and marine resources (FSPI, 2012). There is an increasing concern expressed over the erosion of traditional values and institutions (Abbot and Pollard).
4.3.3 Natural Assets

Population pressures on limited natural resources are causing a reduction in the possibilities for sustainable livelihoods in many Pacific islands (Chand, 2004). Support for traditional livelihood activities, which mainly revolve around these resources, require improvements in their management and planning (FSPI, 2012). The unsustainable use of marine resources in particular poses the greatest threat to both sustainable livelihoods and biodiversity (Gough et al., 2010). To work with the communal ownership of land and sea resources, approaches such as the Locally Managed Marine Areas in Fiji and elsewhere in the Pacific, promote community organisation and improve planning. This type of protected area has a number of livelihood benefits and also some costs that need to be minimised to successfully contribute to sustainable livelihoods in the Pacific islands:

<table>
<thead>
<tr>
<th>Positive Impact</th>
<th>Negative Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Improved quality of natural resources including fish numbers, water quality, recovery of land</td>
<td>1. Reduced access to resources</td>
</tr>
<tr>
<td>2. Tourism development increasing income and employment from protected areas</td>
<td>2. Loss of support for traditional activities</td>
</tr>
<tr>
<td>3. Payment for environmental services and development schemes,</td>
<td>3. Loss of some employment options</td>
</tr>
<tr>
<td>5. Protection of natural resources and biodiversity</td>
<td>5. Shifting power structures</td>
</tr>
<tr>
<td>6. Improved governance processes, participation and greater community organization</td>
<td>6. Potential for unequal distribution of benefits</td>
</tr>
<tr>
<td>7. Increased community resilience and adaptation</td>
<td></td>
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<tr>
<td>8. Decreased cultural loss</td>
<td></td>
</tr>
<tr>
<td>9. Poverty reduction</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Positive and Negative Livelihood Impacts of Protected Areas (adapted from Bennett, 2010; Govan et al, 2009)

4.3.4 Physical Assets

The increasing number of people living in settlements outside of towns and cities proves that land is a serious problem in Pacific islands – lack of individual title and secure long term access to land is a major hurdle and a key asset to acquire (Chand, 2004; Sanderson, 2000). Communal land ownership (totalling around 90% of land in Melanesia) has impeded access to the use of...
land as a resource and as collateral for finance (Abbot and Pollard, 2004; Connell and Lea, 2002; De Soto, 2003). With the monetisation of Pacific society, more people are understanding the role that land plays in economic development (Abbot and Pollard, 2004) and the constraints placed on private sector development. Access to land would allow more people to take advantage of opportunities for agricultural production (Rogers, 2008), to access loans for start up businesses, and enable movements out of poverty (De Soto, 2003). The difficulty in the Pacific is mobilising land without threatening traditional ownership – an issue of tension, and outright conflict, in many Pacific countries (Abbot and Pollard, 2004).

Agriculture is back on the Pacific development agenda, to increase economic growth, combat the impact of high food prices, improve the availability and diversity of food, and to reduce poverty, especially in remote or outer island areas, and stabilise household incomes (Rogers, 2008). Increases in locally produced staples would help to offset some of the cost of imported staples such as rice. Kava\(^{10}\) is very successful domestically, and showed great potential in Fiji and other islands for export, but due to bad publicity on the European market it declined drastically (Abbot and Pollard, 2004; Connell, 2010), and feasible alternatives such as industrial hemp have regulatory barriers to overcome (Connell, 2010). Government supported schemes aiming to encourage agricultural sector growth through a variety of produce, have had some success but due to a range of factors, including poor market development and farm management, the success ebbed away leaving only a few niche providers (Abbot and Pollard, 2004; Connell, 2010). Profitable agriculture, in the current highly volatile economic environment, needs security of land tenure, access to inputs, hard work and good farm management, quality goods, wide ranging technical support, training in growing non-traditional crops, infrastructure improvements, market access and access to credit when needed (Abbot and Pollard, 2004; Connell, 2010; Connell and Lea, 2002). In Fiji, older farmers lack the hands on labour and farm management skills needed, whilst the young lack interest (Abbot and Pollard, 2004).

Poor infrastructure, including roads, ports, shipping, transport, communications, and markets, is limiting economic opportunities in the region (Hein, 2004; Rogers, 2008; UNDP, 2005; UN-“

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\(^{10}\) Kava, or yaqona, is a popular narcotic drink, traditionally used in ceremonies, but has turned into a social drink particularly popular with young men who can often be found drinking kava most evenings, but it is used by all adults.
Support for agricultural, and other livelihood activities, will only be successful if combined with improvements in infrastructure and market access, both domestically (enabling farmers and fishermen a foot in the door of the cash economy) and internationally (Abbot and Pollard, 2004; Anglican Alliance, 2011; FSPI, 2012). Most Pacific islands have well developed local produce markets, but with potential producers selling from a number of scattered islands, there is a need to improve coordination between islands, and possibilities of partnering with businesses and/or an 'honest broker' to mediate between producers and buyers (Anglican Alliance, 2011; FSPI, 2012). This approach must also be linked with effective legislation to ensure open and fair partnerships.

### 3.3.5 Financial Assets

The financial structure, as in other developing countries, consists of both formal (central and development banks, housing finance, provident funds, insurance companies) and informal institutions (credit and savings groups, credit unions, money lenders) (Cornford, 2000). It is estimated that only 20% of adults in the Pacific region have access to formal financial services (IFRC, 2004). Informal, mostly community led, financial services are very prominent in most villages and towns. Informal credit groups are often made up of women, although there are male and mixed groups, who contribute and borrow the funds, usually a small amount (sometimes just a few cents a week), usually for specific expenditure such as school fees, social obligations or emergencies (Ward and Yeoman, 1997).

Micro finance has been successful throughout the developing world, giving access to financial capital to start small scale enterprise, but has had mixed success in the Pacific islands due to a number of factors (Ward and Yeoman, 1997). Community financial literacy training linked to micro finance would be useful if promoting small business as a means of sustaining a livelihood, and small business training, particularly the financial side, would help to ensure that people do not fall at the first hurdle when managing their business (FSPI, 2012; Ward and Yeoman, 1997). The Grameen Banks model of microfinance, where social capital is the collateral for money lent, has been replicated throughout the world, including in Fiji where The Women’s Social and Economic Development Programme (WOSED) targets disadvantaged women, providing small loans (70% of which are for agricultural activities), business and technical advice and promoting savings. Critical to its success is the close monitoring and supervision provided, peer pressure, 'revolving funds', intensive borrower training, and sound
management (Ward and Yeoman, 1997; WOSED, 1998). WOSED also works towards integrating the women into the formal banking system with the aim of increasing the financial services on offer to them. This is a replicable project which would be of great financial help to people throughout the Pacific.

3.4 Chapter Summary
Supporting the informal sector, including those engaging in subsistence agriculture, is key to improving the quality of life of communities, and contributing to economic growth. Spanning this chapter is the need for information, which is one of the scarcest resources, especially for remote and outer island communities (FSPI, 2012). In order to encourage sustainable livelihoods in Pacific, a variety of inter-linked assets need support, including:

Human Assets
- Improved skill development in line with emerging markets
- Female participation in the workforce must be encouraged
- Possibilities for migration as a strategy

Social Assets
- Activities must not diminish the strength of traditional cultures and community cohesion

Natural Assets
- Community planning and monitoring of natural resources

Physical Assets
- Land ownership is key to accessing a wide range of resources
- Support for agriculture especially in remote communities
- Improvements in infrastructure and access to markets

Financial Assets
- Informal savings groups should be supported.
- Microfinance offers an alternative source of credit
Chapter 5 Presentation of Levuka Findings

Photo: Levuka Welcome Sign

This chapter presents the findings of the data collection in Levuka, Fiji, showing how individuals (men, women and children) were impacted and coped with the closure of PAFCO. The data is presented using the SL models five asset groups, and within these, the common themes that emerged from the semi structured interviews and focus groups, are used as sub-headings. All data is summarised in a table at the end of the chapter, making clear divisions between the closures impact and the coping strategies employed.

5.1 Human Assets

5.1.1 Labour

“I know I am usually at work all day, but I find many jobs to do at home when I am not working. It was nice to be at home to see my children get to school and to be here when they return. I was going to make some mats and maybe sell some food in town but the materials were expensive and who will buy them?” (quote from V, Female, 31, Tuna Loin Processing) (SSI2))

Women are the main household income earners, holding the majority of positions in PAFCO.
Men are engaged in subsistence farming, fishing, generating income through alternative sources (see financial asset section), and to some extent child care (this being shared with unemployed women and girls in the extended family). The focus groups reported that, during the closure, there were few opportunities for alternative work, and increased competition for any work that came up. All female respondents stated that, although they had a lot of extra time on their hands, they easily fell back into the child care and housework role (which they were already doing around work anyway), with most alternative work opportunities taken up by the men, and they were unable to rejoin the workforce until PAFCO reopened. Half of the interviewees with children stated that their children helped out on the family plantation\(^\text{11}\), and with other livelihood activities, this being especially so with families unable to afford school fees.

### 5.1.2 Skills and Information

“I was lucky and was chosen to attend a course on refrigeration. I learnt all about it! When I am working my job in PAFCO, I can use my spare time to fix fridges and air conditioning to make some extra money.... When I was off of work, I went to Suva and found some part time work there with a company, it was easy” (quote K, Male, 28, Refrigeration Engineer - SSI9)

Eight of the interviewees are classified as 'unskilled', and could really only usefully apply their skills to a very similar role. The focus groups, and the younger male interviewees, complained of the limited opportunities for skills training on the island, and that courses on the mainland were prohibitively expensive due to the associated accommodation and transport costs there. Two of the interviewees, both male, were trained by PAFCO in specialist roles such as refrigeration maintenance and administration, and were able to replace some of their lost income with private jobs during the closure.

Knowledge of how to implement additional income earning activities was limited, especially amongst the women respondents, and they did not know where to access information on accessing markets, transporting goods, or the income that could be expected. Skills training

\(^{11}\) 'Plantation' is used throughout this paper to describe a small farm used mainly for subsistence purposes, although larger plantations are used for commercial purposes. Settlement plantations in Levuka are generally poor, rocky, peripheral land, but land that is not owned by a village which would be forbidden to use.
had not taken place in the settlement, but some had taken place in villages, where a key respondent witnessed that due to no follow up support and poor capacity building, most initiatives had failed.

5.1.3 Education

“I am not at school today, and I wasn't at school yesterday too. It's ok, you can just pay when you have money... no you have to pay when you go, if you ask the teacher if you can come to school and you have no money they will send you away” (quote from child of V (SSI10))

Having children gain an education was stated as a priority by all interviewees and focus group respondents. Of course, valuing education does not guarantee attendance and an inability to afford fees was the main cause of children being kept at home. Three of the six interviewees with school age children kept one or more of their children home from school for some, or all, of the closure. Those who had paid fees up front were still covered during the closure, but those who paid each term struggled to pay for the September term. Some respondents paid on an ad hoc basis when they had some spare money, finding that they were quickly in arrears with the schools.

5.1.4 Health

“When I am working and I have a toothache, I will go to see the dentist. But when there is no money I cannot pay for the medicine so I ask the elders what they use to stop the pain...” (quote from male focus group participant, PAFCO security)

The focus groups reported that they continued to attend hospital or clinics when feeling unwell as they did before, as the service is free. Seven of the interviews and a large proportion of the focus groups reported that they, or a family member, would use the free prescription service to obtain pain killers for dental complaints until they could afford treatment. There was evidence of a widespread use of traditional medicines, advised by community elders and taken up by younger generation. More complicated health issues are referred to Suva, with the associated cost of transport being taken on by the patient, causing additional financial stress.

“I will always make sure my child has enough to eat, and I might just have two
meals today instead of three because we didn’t know when we were going to go back to work” (quote from female focus group participant, PAFCO worker)

All interviewees and focus groups stated that they ate a good diet of fresh food from the plantation and 'bush', supplemented by shop purchased food such as rice, flour, oil, salt, sugar, which became unaffordable during the closure. Those that were able to afford some shop purchased food would then distribute it to extended family members.

5.2 Physical Assets

5.2.1 Infrastructure and Transport

The focus groups reported that there had been some infrastructure improvements including certain stretches of road, especially those leading to the ferry landing. Transport around the island is mainly carriers and taxis that operate largely to transport the PAFCO workers to and from the villages around the island, and transport to the mainland is either by a combined bus and ferry (F$70), or an expensive, plane service. There are no shipping services to nearby islands, limiting opportunities for inter-island trade. The transport system was one area to suffer badly during the closure, which will be dealt with further in the local business section. Respondents complained that there is an empty market building in Levuka, that is quite a distance away from the centre of town, and people will instead sell goods on the sea wall when PAFCO is open. All respondents had access to a water supply, either directly pumped into their homes or to a standpipe, the cost of which is relatively small, but interviewees sometimes used water from the creek for washing instead. Energy supply is usually from expensive electricity and there was evidence of electricity sharing amongst households.

5.2.2 Land Ownership

“Maybe the Town Council will let us live on this land for another 10 or 20 years.... we don’t know” (quote from R, Male, 31, Tuna Loin Freezer - SSI1)

All of respondents do not own their land, have no opportunity to purchase their land, their presence tolerated by the local authority that owns the land, and cited this as a major livelihood constraint. Land cannot be used as security for obtaining credit, and they cannot access certain Provident fund withdrawal exemptions i.e. for household improvements (see financial asset section). Most respondents understood that they may be asked to leave at any
time, and most cited that the land would most likely be demanded to build a hotel or other amenities for tourist population. The settlement community have no rights to the plantation land they farm either, but their use of this land (mainly due to it being peripheral and steep) is tolerated by the authorities.

5.2.3 Productive Assets
All people living in the settlement have access to some land in which to farm. The settlement land is peripheral, on the side of a hill, and plantation land is limited and rocky. Fruit and vegetables grown include cassava, dalo, aubergine, Chinese cabbage, chillies, pumpkin, bale, sugar cane, roro leaves, papaya, bananas, pineapple, guavas and oranges, alongside kava. Tools are shared between extended families, consisting of a couple of saws, lots of machetes and basic fishing equipment. Chainsaws, strimmers and open water fishing equipment (i.e. spear gun) could be hired locally.

“Maybe the closure was trying to tell us something – that we need to work on our plantations, that we rely too much on someone giving us money” (quote from male focus group participant, Farmer)

One household interviewed had two workers laid off from PAFCO, and reported that at the time they were not utilising their plantation, that it was overgrown, and purchased all of their food for consumption. This caused great problems in meeting basic food needs during the closure, as they were no longer able to purchase anything at all, and had no food growing. To satisfy immediate food requirements, the household had to draw on social assets to share food in return for labour or other help.

5.2.4 Local Businesses
“Levuka is a beautiful town, but how can we afford the upkeep of a heritage building when the business we use it for has no customers?” (quote from N, Male, 52, Business Owner, KI2)

“I was earning F$300 a week, the PAFCO workers were my main business. It was such a shock to go from that to nothing. Some of the others lost their carriers because of the payments, but I was lucky that mine was paid off...” (quote from
male focus group participant, Business owner).

The following table provides data gathered mainly from the focus groups, but also from two of the semi-structured interviews:

<table>
<thead>
<tr>
<th>Business</th>
<th>Activities</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxi and Carrier Drivers</td>
<td>Carry PAFCO workers to and from work and the villages</td>
<td>Loss of main income source Repossession of vehicle</td>
</tr>
<tr>
<td>Sea Wall Women</td>
<td>Sell fruit and vegetables</td>
<td>Customer base dramatically reduced. Consume rather than sell produce.</td>
</tr>
<tr>
<td>Snack sellers</td>
<td>Sell snacks at lunch time</td>
<td>Customer base dramatically reduced. Unable to afford to buy ingredients.</td>
</tr>
<tr>
<td>Small family run shops</td>
<td>Sell basic goods in villages and settlements</td>
<td>Cost of transport prohibitive so people spend their money more locally. Less money in economy, less demand.</td>
</tr>
<tr>
<td>Tailors</td>
<td>Make and mend clothing, school uniforms</td>
<td>Customer base dramatically reduced. Less able to afford material</td>
</tr>
<tr>
<td>Community Kindergartens</td>
<td>Child care facility for working parents</td>
<td>Low demand - Parents now at home</td>
</tr>
<tr>
<td>Levuka Town Businesses (in heritage buildings)</td>
<td>Supermarkets Newsagent/internet café Bakeries</td>
<td>Difficult to afford rent payments. Unable to make repairs to buildings Council rates and utilities in arrears.</td>
</tr>
</tbody>
</table>

Table 3: Business Activities and Impact

5.3 Natural Assets

5.3.1 Fuel Sources

Interviewees preferred to use cheaper Kerosene over gas for cooking fuel, but without incomes there was a higher reliance on firewood. Male interviewees reported that they had to go further inland to find firewood, even a year after the closure. Only one interviewee had a firewood store, and it was reported that when there is no firewood meals would be postponed until it is found.

5.3.2 Sea and River Resources

“My family usually like to eat chicken that we buy from MH [supermarket], but we couldn’t afford it. I was worried about making sure my children had a good diet, so my husband fished more at night after he worked in the plantation” (quote from female focus group member, Homemaker)

All respondents reported an increase in sea fishing for consumption. There are controls on reef
fishing beside Levuka Town, with the Chief of Levuka Vakaviti (Levuka Village) having fishing rights to that area. He allows fishing for consumption along the reef, but a licence from the Fisheries department is required for commercial fishing. Although a majority of fishing done by women is hand fishing from the sea wall and port, there has been no assessment made of whether all fishing on the reef was non-commercial, and what the impact of increased fishing was on the reef.

5.4 **Financial Assets**

5.4.1 **Income**

All respondents reported that PAFCO was their household’s main source of income, which, after deductions for their canteen bills, national savings and other fees, is on average between F$90-120 weekly (£30-40). One family from the settlement had migrated to Suva, found work to replace their income, and were not planning on returning. The PAFCO workers that attended the focus groups, stated that this would have been a strategy employed themselves had the promise of their job at PAFCO been removed. All workers contribute to an official pension scheme called the Fiji National Provident Fund, and go on to receive a pension at retirement at 55 years old. There are also some allowances for early withdrawals including housing, incapacitation, moving overseas, health and education (FNPF, 2012). From those of pensionable age, who were willing to disclose in the focus groups, the average income was around F$100 a month (£33.33).

All male respondents, and one woman, had attempted to create new income streams during the closure, some of which were pre-existing activities that provided an unreliable income stream:

<table>
<thead>
<tr>
<th>Number of Interviewees reporting income source</th>
<th>Additional Income Source</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Selling kava</td>
<td>Pepper plant roots, used for a popular narcotic drink.</td>
</tr>
<tr>
<td>9</td>
<td>Selling root crops</td>
<td>Including Dalo and Cassava</td>
</tr>
<tr>
<td>6</td>
<td>Local casual labour</td>
<td>On other plantations. Pay is F$20 a day (approx £6.66)</td>
</tr>
<tr>
<td>5</td>
<td>Sea fishing</td>
<td>Sold to the local restaurants, and wholesalers</td>
</tr>
<tr>
<td>4</td>
<td>River fishing</td>
<td>For fish and prawns</td>
</tr>
</tbody>
</table>

41
The most lucrative option, of selling cash crops, was reported to have consistent demand and high price, although it was only utilised by those who were already growing, as kava takes 3-4 years to mature and Dalo and Cassava between 3-9 months. There was mixed success from selling cash crops, with those who had previously had experience of selling, or who knew others who were selling, earning considerably more income.

Remittances from family abroad are a source of income for three of the interviewees, but respondents reported that they often ended up with very little, after exchange rates and charges. Recent benefits include a system called M-Paisa, where money can be sent via mobile phone, but this is not an option for family members in Europe (who are generally serving in the British Military) which is the majority source of the interviewee's combined remittance income.

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### Table 4: Additional Income Sources

<table>
<thead>
<tr>
<th>Income Source</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remittances</td>
<td>Mainly from family in Australia, New Zealand, and Europe</td>
</tr>
<tr>
<td>Casual labour</td>
<td>Ad hoc jobs for local government work or for private contractors</td>
</tr>
<tr>
<td>Making and selling food</td>
<td>Especially puddings and sweets</td>
</tr>
<tr>
<td>Making and selling traditional mats</td>
<td>Largely a women orientated task</td>
</tr>
</tbody>
</table>

---

### Table 5: Main Expenditure Areas

<table>
<thead>
<tr>
<th>Main Expenditure items</th>
<th>Seasonal trends</th>
<th>Able to reduce Expenditure?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>Year round</td>
<td>Yes</td>
</tr>
<tr>
<td>Electricity</td>
<td>Year round</td>
<td>Somewhat</td>
</tr>
<tr>
<td>School Fees including children at university</td>
<td>Start of school terms</td>
<td>No</td>
</tr>
<tr>
<td>Kerosene (for cooking)</td>
<td>Year round</td>
<td>Yes</td>
</tr>
<tr>
<td>Kava and social events</td>
<td>Year round but December and January particularly.</td>
<td>Yes</td>
</tr>
<tr>
<td>Clothing</td>
<td>Start of school terms, year round</td>
<td>Yes</td>
</tr>
<tr>
<td>Church Fees</td>
<td>Year round</td>
<td>No</td>
</tr>
<tr>
<td>Water</td>
<td>Year round</td>
<td>Limited</td>
</tr>
<tr>
<td>Other including gas, rent, travel to other islands</td>
<td>Year round</td>
<td></td>
</tr>
</tbody>
</table>

In the interviews, respondents placed their main expenditure items in order. All respondents
stated that food was their highest expenditure item, and were impacted by increases in food prices. Most people do not pay a mortgage or rent, but those with rent payments cited that as their highest expenditure. Interviewees and focus groups reported that they were unable to purchase both staple and other food, and goods including kerosene, electricity top ups, phone credit, and school equipment. Respondents stated that they were able to get credit from local supermarkets, but this was not consistent. Almost all respondents owed money to a company after the closure and some were still repaying a year later. Despite efforts by respondents to reduce the usage of electricity, kerosene, gas and water during the closure, it was impossible to avoid all expenditure on these items.

“It was difficult to cut down on all of my outgoings - some things you really need to buy. I didn't like having the arrears... I was worried about being taken to court or having my water cut off... it was very stressful” (Quote from M, Female, 53, Tuna Loin Processing - SSI3)

There were reports from the focus groups that some individuals had been taken to court due to their inability to pay, and that goods including televisions, ovens, fridges, freezers, mattresses, and other furniture were repossessed, but there was no social stigma attached to this.

5.4.2 Savings

Two of the key informants reported that savings are not a traditional practice in Fiji, and that planning for the future is rare. The researcher found that this was changing, and although saving in formal institutions such as banks was indeed rare, all interviewees were members of one or more social savings groups, which act informally (see social asset section below).

Once savings were depleted, respondents were asked who they would go to to ask for money and to rank them in order.

<table>
<thead>
<tr>
<th>Source of cash</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Savings group</td>
</tr>
<tr>
<td>2  Sell crops or kava</td>
</tr>
<tr>
<td>3  Family</td>
</tr>
<tr>
<td>4  Money Lenders</td>
</tr>
<tr>
<td>5  Friends</td>
</tr>
</tbody>
</table>

Table 6: Sources of Borrowing
Money lenders were generally an undesirable source of money, with men more likely to borrow in this manner than women. Money lenders are often people who have steady income in comparison to most others on the island. The interest they charge is very high at around 20%, yet they did good business during the closure.

5.5 Social Asset Assessment

5.5.1 Strong community cohesion

“I knew that my family and the church would support me during the closure. We always look after each other... that is the Fijian way” (Female focus group respondent, PAFCO worker)

The respondents have a high level of social assets, and a sense of collective responsibility for maintaining them, praising their extended family and community for their strong cohesion and support. All extended families contributed to the common good, with those more fortunate willing to help those who were struggling. Food was communal, electricity was shared through the use of extension cables between houses, excess food from the plantations was distributed, 'clean up Tuesdays' were started to help maintain each others' plantations, amongst other examples. Overall the social organisation of the community is their strongest asset and an important resilience factor.

5.5.2 Social obligations

The contribution to social events such as weddings and funerals was a high priority for all interviewees, and failure to contribute a socially acceptable amount of goods or money can be seen as selfish and socially damaging, whereas previously woven mats, traditional food, and other homemade items would have sufficed. Some people didn’t feel they were able to attend social events due to being unable to afford a suitable gift or to contribute in some way. Others postponed personal events due to the closure:

“I was planning on getting married during those months, but I was worried that people would feel like they couldn't come as they would have to bring something. It is the older generation that worry about these things, I just want
my friends and family to see me marry” (Quote from R, Male, 31, Tuna Loin Freezer - SSI1)

The custom of Kerikeri allows people to make requests of others, which they must comply with. This can range from food items and clothing, to plantation land and money. Respondents reported using a variety of strategies to prevent Kerikeri requests, often at the expense of personal success and financial security, including the hiding of expensive items, understating how much money they have left to spend or how much food they had, and importantly to not make excessive requests from others as this was likely to be reciprocated.

The church has a very important role to play in community life, with Sundays reserved for church services and family time, with various other services throughout the week, and financial contributions to the church collections were a priority for many families. Youth groups operate in all churches, with all under-30s who are unmarried expected to actively participate, including in fundraising events.

5.5.3 Social Savings Groups
Fiji’s close and organised social relationships have led to the development of a variety of informal savings groups, saving for a number of reasons; mothers saving for school fees, PAFCO workers saving for a Christmas party, and many others. A particular example of interest is an extended family group who are on a spectrum of financial stability, and not all households are able to plan for social occasions. All families contribute to a savings group, both on a regular or ad hoc basis, enabling all family members to both attend and contribute to all social events that crop up. From speaking to many members of this family in the focus groups, it was clear that it had alleviated a lot of the stress associated with the financial and material strain that they faced when an important event occurred, during the closure.

Informal social groups have also diversified to provide borrowing services, maximising their return by lending small amounts of money and charging a slightly better interest rate than other money lenders. They proved to be a very popular source of small credit for local people. There were, however, issues of misuse of funds reported by other groups, for which there is little legal comeback.
5.5.4 Social fundraising (Soli)

Both social savings groups and families host fundraising events known as a Soli. This is a social event centring around the consumption of kava, with attendees expected to give F$1-2 when they sit down. Individuals can also hold Solis but they would need a good reason, such as needing help with their financial arrears, or because they are travelling overseas. It is a very successful and socially acceptable way of fundraising money, and there are usually Solis taking place throughout the week for a variety of reasons. The focus groups reported that during the closure this practice was temporarily suspended as everyone was struggling for money.

5.6 Planning for the future

Respondents had mixed views over whether Bumblebee Foods leaving Levuka would be a big issue. Some believed that the factory would then close for good as no other company would be willing to take it over. Others were boosted by the knowledge that the Prime Minister, Frank Baininarama, had visited the factory and had made promises for the factory's survival. Older respondents were concerned that fish stocks would create a problem for sustainable livelihoods on the island, with PAFCO jobs dependent on that natural resource.

All respondents were asked in which way, if any, they were planning for future closures. Almost all gave the answer that they were not planning for future closures since they had returned to their jobs and were receiving a weekly income again. Two focus group respondents stated that they were planting more on their plantations, and these were those who had learnt their lesson from being out of work with an unproductive plantation. No one was building any extra savings in a bank or other formal institution, and those who were previously saving in an informal group were continuing to do so at the same rate.

5.7 Chapter Summary

<table>
<thead>
<tr>
<th>Impact</th>
<th>Coping Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting Basic Needs</td>
<td></td>
</tr>
<tr>
<td>Shop bought food expensive</td>
<td>Sell belongings and/or productive assets</td>
</tr>
<tr>
<td></td>
<td>Eat fewer meals and/or less variety</td>
</tr>
<tr>
<td></td>
<td>Borrow food from other sources</td>
</tr>
<tr>
<td></td>
<td>Requesting credit from the shops</td>
</tr>
<tr>
<td>Cost of fuel (kerosene and gas) and electricity unaffordable</td>
<td>Reinstate any underutilised plantation land</td>
</tr>
<tr>
<td>Cost of piped water less affordable</td>
<td>Higher use of ‘free’ reef and river resources</td>
</tr>
<tr>
<td></td>
<td>Plug into each other’s electricity</td>
</tr>
<tr>
<td></td>
<td>Go into arrears with companies</td>
</tr>
<tr>
<td></td>
<td>Increased use of firewood as fuel</td>
</tr>
<tr>
<td></td>
<td>Using river water more for washing</td>
</tr>
</tbody>
</table>

### Building Assets

| Few opportunities for jobs and more competition | Migrate to the Capital City to find work |
| Low number of active income earners | Women revert back to house and child care duties |
| | Children utilised more to help with income generating |
| Low skill level of PAFCO workers | Find alternative income source not using factory skills |
| Loss of main income source | Skilled workers found work privately |
| | Additional income sources |
| | Reduce expenditure |
| | Migrate |
| Increased pressure to meet community obligations | Depletion of savings |
| | Increase in borrowing money |
| | Suspension of Soll fundraising activities |
| | Attend less social events |
| Less able to contribute to social savings | Depletion of savings |

### Access to Resources

| School fees unaffordable | Children kept at home |
| Transport to hospital, and some treatments expensive | Increased use of traditional medicine |
| Business customer base lost and reduced profits, repossession of vehicles and property | Postponing treatment due to cost |
| | Taxi and Carriers stop running services |
| | Close business |
| | Reduce lines of credit to customers |
| Cannot access financial services including credit | Migrate to mainland |
| | Borrow money from elsewhere or deplete savings |

Table 7: Impact and Coping Summary
Chapter 6 Discussion, Recommendations and Conclusion

Using the SL framework, this section will analyse the findings of the Levuka data linking it with the literature review and Pacific island chapters (objective 1), in order to, firstly, fully investigate the impact of the closure on the community (objective 2) by focusing on three areas of impact - Basic needs, Access to Resources and Building Assets - which relate directly to the SL framework, and, secondly, for each of these analyse the coping strategies employed by the Levuka community into 'Positive', 'Negative', and 'Potentially Unsustainable' (objective 3). The researcher will use this analysis to make recommendations for the support of sustainable livelihoods in Levuka, which must help to meet basic needs, build assets, increase access to resources, reduce negative, and promote positive, coping strategies (objective 4), ending with conclusions.

6.1 Meeting Basic Needs

Throughout the closure social assets and subsistence plantations helped community members to meet their basic needs. With natural resources vital to Pacific island livelihoods, the unsustainable use of firewood for fuel, and marine resources for food, were the main impact concerns in this section.

There were struggles to afford expensive shop purchased food, including protein sources, leading to an increase in use of marine resources. This increased pressure on the marine
ecosystem could have a major impact if PAFCO is to close permanently, and as with commercial fishing around Levuka, it may result in rules restricting consumption fishing practices. There is already a Locally Managed Marine Area (LMMA) in place up the coast from Levuka, and managed by a nearby community, which may be successful enough to prevent the depletion of fish stocks and other marine resources.

The increased usage of other natural resources to meet basic needs included firewood for fuel, and water from local rivers for non-drinking purposes to save money, and issues here include the depletion of wood and land degradation, alongside potential pollution of the river water. A permanent close of PAFCO has the potential to have a very negative impact on the natural environment, and therefore the ability for households to meet their basic needs, proving that the community do not thrive in 'subsistence affluence'.

<table>
<thead>
<tr>
<th>Negative</th>
<th>Potentially Unsustainable</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sell productive assets</td>
<td>Use of sea and river resources</td>
<td>Reinstateland plantation</td>
</tr>
<tr>
<td>Eat fewer meals</td>
<td>Increased use of firewood as fuel</td>
<td>Borrow food from family</td>
</tr>
<tr>
<td>Credit from the shops</td>
<td>Using river water more for washing</td>
<td>Plug into others electricity</td>
</tr>
<tr>
<td>Arrears with companies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8: Categorisation of basic needs coping strategies

The coping strategies used to meet basic needs were a priority for the community and utilised a number of different asset groups. Replanting on unused plantation land, and utilising social networks to share food and power were positive strategies that will continue to improve community resilience to future income shocks. Potentially unsustainable strategies revolve around the community's use of natural resources, which could prove to be a problem in the future. The resulting negative coping strategies are related to restricting food consumption, selling assets and getting into debt, which reduces the communities overall level of financial and physical assets, and also their ability to build assets.

6.2 Building Assets

During the closure, it was clear that the existing level of human assets, such as skills, was a determinant of how well an individual or family coped during the closure. Those who had a higher skill level were able to find work both in Levuka and on the mainland, leaving those who
had lower skill levels less able (or unable) to compete for the jobs that were available. With PAFCO having been open since the 1970s, there is a whole generation of young people who have gone to work and have no experience of generating money through other activities. The youth population is a key strength for Levuka, as it is in the Pacific region generally, but skill related information is severely lacking, with training courses not being complemented by ongoing support, leading to the failure of livelihood initiatives. Improvements in the Pacific region’s areas of comparative advantage, such as agriculture, fisheries and tourism would be appropriate, the latter particularly should Levuka be granted UNESCO World Heritage status, although this would need to be levied against the settlements concern about their eviction from the land potentially for tourism development.

The community are already skilled in growing both staple crops and kava, which would do well on the domestic market, and although the production of other non-traditional crops would require training, as would improvements in farm management, agriculture has the potential to be a sustainable livelihood activity for the community. Support from the government is likely due to agriculture’s re-emergence as an economic priority. This would help the under-employed youth population, combat the food price increases, and increase economic growth, all of which are priorities in Levuka and other outer islands.

Migration overseas is one area that the Pacific islands could take advantage of, but in Levuka there was limited evidence of a desire to work overseas, and all mention of migration centred around a move to the Capital city due to the success of others who had migrated there. It could be deduced from this that should PAFCO close for good, without alternative employment options, many more people will leave. Support for livelihood activities in Levuka may help to stem some of this movement, although as mentioned previously, many initiatives in outer islands have failed to curb the desire to migrate for better opportunities.

The ability to build, or just to sustain, the level of financial assets was highly impacted, having an impact on the community’s ability to build other assets. The loss of the community’s main source of income was a huge shock, for which individuals and families were not prepared. Most households had other income sources which, with the closure of PAFCO a possibility, could potentially become their main income source, most of which are based around agriculture and natural resources. The communities found it difficult to reduce expenditure, and had a large
number of obligations and necessities that were a struggle to afford. Access to formal credit was almost non-existent, due to a lack of land ownership, and most households relied on informal credit, and social savings, to get by. Encouraging the community to save, through the use of financial literacy programmes (both for household budgeting and business finance), improvement in informal savings group management, and the fostering of the practice of 'planning ahead', are initiatives currently lacking in both Levuka and the Pacific region. WOSDE (see Pacific island chapter) has provided less than 10 loans in and around Levuka, and the expansion of this credit provision would be very useful to the community, especially as the loans are complemented by support and financial training.

Social assets are the strongest asset category, and the greatest resilience factor. Strong community cohesion and a strong traditional culture limited the negative impact of the close for the community as a whole. This was evident in the sharing of goods, financial support for the extended family, and with the social savings groups. Being such a strong part of everyday life, there is a limited need to support these social structures that are currently well maintained and nurtured. There are, on the other hand, certain social obligations that did cause stress, both socially and financially. These include the monetisation of traditional ceremonies, such as weddings and funerals, inflexible church dues and cultural practices such as kerikeri. Here again, the benefits of social savings groups are clear, and support would be immensely beneficial to reduce financial vulnerability.

Another social issue is of women in the workforce. With a majority of the PAFCO workers women, and the challenges this has posed to traditional gender roles, there was a reversion back to women staying at home, and men engaging in income generating livelihood activities. Whilst investigating alternative livelihood options should PAFCO close permanently, it will be important to ensure that there are opportunities for women to continue to be part of the labour force, including in areas such as crafts, market selling and inshore fishing.

<table>
<thead>
<tr>
<th>Negative</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women revert to child care duties</td>
<td>Find alternative unskilled work</td>
</tr>
<tr>
<td>Children in income generation</td>
<td>Skilled workers find work</td>
</tr>
<tr>
<td>Depletion of savings</td>
<td>Additional income sources</td>
</tr>
<tr>
<td>Increase in borrowing money</td>
<td>Reduce expenditure</td>
</tr>
</tbody>
</table>
Suspension of ‘Soli’s’
Attend less social events

Table 9: Categorisation of Building Assets Coping Strategies

Positively, the community did seek out alternative work opportunities, which was easier for skilled workers, and continued to pursue pre-existing income sources outside of PAFCO, which supported the building of assets, or at least preventing asset depletion. Negative strategies holding back the building of assets affected financial assets through additional borrowing and the depletion of savings, social assets by the avoidance of social events and other activities, and human assets through women’s exit from the labour market, and the increase in children participating in income generation rather than focusing on their education, overall affecting the community’s access to resources, including education and jobs.

6.3 Accessing Resources

The ability to afford to pay for education and health, which allow a person to be a productive skilled worker, was a concern. It is difficult to see the benefits of improved skills training in schools if parents cannot afford the fees to allow their child to attend, and this does little to reduce the number of school drop outs. There is potential for adult ex-PAFCO employees to use the allowances in the Provident Fund to access training courses on the mainland in order to improve skills, and to pay their children’s school fees. Equally, avoiding health treatments is very dangerous, but the increase in use of traditional medicines was a benefit to the community, and helps to rebuild some of the damage to traditional values that is a concern throughout the Pacific.

The opportunities for the community to engage in successful agricultural and other livelihood activities for profit, is reliant on factors such as land ownership, and resources including markets, training, and credit. Land reform is a key issue in the Pacific islands, and this is no different in Levuka. Without land titles, the settlement community is unable to access formal credit, or to utilise land as an economic asset. Additionally the feeling of insecurity due to not owning the land upon which they live, is a disincentive to invest in improvements to other physical assets such as plantations and housing. How to mobilise this land as an asset without threatening traditional ownership is key, but unfortunately outside of this paper’s scope.
Transport around the island is good, for as long as PAFCO is open, but inter-island shipping causes a problem, with one company having a monopoly on the only route off of the island. Access to markets would be aided by improved inter-island transport and more competition on the route to the capital city, increasing the number of people able to trade with Levuka from other islands in the province. ‘Honest brokers’ could be introduced to facilitate access to markets and to increase trade, which could either be an NGO or through the local government. Levuka could become the economic hub, as well as already being the administrative centre, of the Lomaiviti province, utilising the market space that is currently underused, and by extension bring trade to local businesses that suffered during the closure.

Access to resources such as goods and services were limited during the closure due to the failure of some businesses, the reduction of credit facilities, and the cessation of many transport related businesses. All businesses in Levuka suffered from a loss of customer base and reduced profits, and in some cases resulted in the repossession of vehicles and property. Levuka's businesses will benefit greatly from an improvement of community livelihoods, increasing trade and cash in the economy, but they will suffer greatly should PAFCO close without any successful intervention in the livelihoods of the community.

<table>
<thead>
<tr>
<th>Negative</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children kept away from school</td>
<td>Increased use of traditional medicine</td>
</tr>
<tr>
<td>Postpone health treatment</td>
<td></td>
</tr>
<tr>
<td>Borrow money</td>
<td></td>
</tr>
<tr>
<td>Deplete savings</td>
<td></td>
</tr>
<tr>
<td>Transport stop services</td>
<td></td>
</tr>
<tr>
<td>Close business</td>
<td></td>
</tr>
<tr>
<td>Reduce credit to customers</td>
<td></td>
</tr>
</tbody>
</table>

Table 10: Categorisation of Accessing Resources Coping Strategies

The negative strategy of delaying access to healthcare had a positive impact on the use of traditional medicine, strengthening culture. Negative coping strategies centre around children not accessing school, no access to credit caused a lowering of financial assets through borrowing money and depleting savings, alongside the problems of transport and business closures.
### Recommendations

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Description</th>
<th>Activities</th>
<th>Obstacles</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong></td>
<td>Improve livelihood opportunities for women</td>
<td>Market access for crafts and inshore fishing produce. Training in marketing, business skills and financial management.</td>
<td>Men feeling excluded</td>
</tr>
<tr>
<td><strong>2</strong></td>
<td>Skills improvement especially for youth population</td>
<td>Training in market appropriate skills for emerging markets and areas of local advantage including agriculture, fishing and tourism, and in line with aspirations of community. Training in production of non-traditional crops. Ongoing support to ensure longevity and success of initiatives.</td>
<td>Lack of youth interest in traditional livelihood activities</td>
</tr>
<tr>
<td><strong>3</strong></td>
<td>Improve access to markets for agricultural produce</td>
<td>Improve inter-island shipping routes. Introduction of brokers to facilitate access to markets. Possible use of Levuka’s empty market building as a hub for this activity.</td>
<td>Government support for shipping required Regulation of broker activities</td>
</tr>
<tr>
<td><strong>4</strong></td>
<td>Improve access to both formal and informal financial services</td>
<td>Financial literacy training for savings, services offered by formal institutions. Strengthen management of social savings for school fees, health needs and social obligations. Expand provision of micro credit and include ongoing support</td>
<td>Repayment of credit dependent on success of livelihood activities and related improvements in market access and skill development</td>
</tr>
<tr>
<td>Recommendation 5</td>
<td>Encourage sustainable use of natural resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities:</td>
<td>Encourage use of firewood stores and fuel efficient stoves.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Forestry programme to grow trees specifically for fuel.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Encourage upkeep of a productive plantation to supplement food requirements.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Training in the sustainable management of sea resources.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obstacles:</td>
<td>Requires island-wide support and resources to facilitate change</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommendation 6</th>
<th>Reduce barriers to using land as an economic asset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities:</td>
<td>Investigate feasibility of granting individual land titles to settlement communities.</td>
</tr>
<tr>
<td>Obstacles:</td>
<td>Challenges traditional land management</td>
</tr>
<tr>
<td></td>
<td>Source of conflict</td>
</tr>
<tr>
<td></td>
<td>Risk of eviction from settlement land</td>
</tr>
</tbody>
</table>

6.5 Conclusion

Through an analysis of primary data and related literature, this paper has sought to assess the impact of the temporary closure of PAFCO on the livelihoods of a settlement population in Levuka, and the coping strategies they employed (objective 2 and 3), contrasting this with information on the challenges facing Pacific islands and their specific development needs (objective 1).

Having identified that the Pacific islands face a number of challenges relating to smallness, a remote location, vulnerability to external shocks, governance, demographic and climate issues, that culminate in a poor environment for private sector enterprise and holding back both human and economic development, Chapter 4 discussed the areas in which Pacific Islands require specific support when aiming to achieve sustainable livelihoods. To summarise these included:

- Human assets - skills, migration and information
- Social assets – culture and gender
- Physical assets - land ownership, agricultural support, infrastructure and markets
Natural assets - Planning and management of resources

Financial assets – credit and financial literacy

Having used primary data to assess the impact of the PAFCO closure, and the coping strategies employed by the community, the researcher used the SL framework to divide impact into three areas: Meeting basic needs, building assets, and accessing resources. Levuka had problems meeting basic needs in the areas of food, water, fuel and power, but the impact was lessened by the strength of community cohesion. The community's ability to build assets was highly influenced by social assets, negatively through the pressure of community obligations, but positively through the social savings groups. Most obviously financial assets were seriously affected through the loss of the community's main source of income, and the impact of losing a job was compounded through low level of skills. Access to resources, including transport, markets, school and healthcare, were impacted, alongside the loss of some businesses. Land titles are a key asset that is missing in the community, although overcoming this has proved to be a long term challenge.

Coping strategies were divided into negative, potentially unsustainable and positive. Negative strategies include restricting food, selling assets, non-attendance at education and health resources, borrowing money, children's participation in income generating, women's exit from the labour market and the avoidance of social events and obligations. Positive strategies, which lower community vulnerability to the income shock, were the use of traditional knowledge, seeking out new income opportunities and up-scaling current activities, improved use of plantations, and in particular the support given to each other through social networks. Potentially unsustainable strategies focused on the use of natural resources.

Resulting from the combined analysis of the data, the researcher was able to present six recommendations for the support of sustainable livelihoods in Levuka (objective 4). These were in the areas of women and youth employment, access to infrastructure, markets and financial services, the sustainable use of natural resources and the problem of land tenure. From the analysis it was clear that the negative impact on one asset has a negative impact on another, so these recommendations span the three areas of the SL framework, and also seek to minimise negative, and promote positive, coping strategies.
Appendix 1: Semi Structured Interview Topics

Note: these are the themes of the questioning, but due to the interviews being semi-structured the wording of the questions differed and the ordering was often altered.

Introductions, confidentiality and demographic data
Introduction to researcher and topic, use of data, aims of research, areas of questioning, personal information including name, age, PAFCO or other occupation, number of children

Financial Assets
Financial relationship with PAFCO, other sources of income, new income sources during closure, seasonal trends, others financially supported by them, household expenditure, pension arrangements, savings, credit arrangements, remittances, borrowing money locally.

Social
Children and others living in their home, who helped them during the closure and in what way, membership of any social groups, social fundraising activities, ability to attend social events during the closure, social obligations, perceptions of social cohesion, women’s activities during the closure.

Physical and Natural
Issues surrounding land ownership, use of land for a plantation, type of home they reside in, subsistence activities including farming and fishing, use of marine resources, infrastructure they use or would like to have,

Human
Level of education and skills training, education level of others in household, health issues, access to information.

Future
Planning ahead, savings for future closures, any other activities

Opportunity for questions

Review of information gathered and confirmed by respondent
Appendix 2: Participants

Semi Structured Interviews

<table>
<thead>
<tr>
<th>Key</th>
<th>Name</th>
<th>Gender</th>
<th>Approximate Age</th>
<th>PAFCO Occupation</th>
<th>Number of school age children</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSI1</td>
<td>R</td>
<td>M</td>
<td>31</td>
<td>Freezer</td>
<td>0</td>
</tr>
<tr>
<td>SSI2</td>
<td>V</td>
<td>F</td>
<td>36</td>
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<tr>
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<td>M</td>
<td>F</td>
<td>53</td>
<td>Processing</td>
<td>0</td>
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<tr>
<td>SSI4</td>
<td>S</td>
<td>M</td>
<td>59</td>
<td>Canning</td>
<td>2</td>
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<tr>
<td>SSI5</td>
<td>J</td>
<td>M</td>
<td>49</td>
<td>Managerial</td>
<td>5</td>
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<td>M</td>
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<td>39</td>
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<tr>
<td>SSI7</td>
<td>S</td>
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<td>SSI8</td>
<td>T</td>
<td>M</td>
<td>52</td>
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<td>3</td>
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<tr>
<td>SSI9</td>
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<td>28</td>
<td>Refrigeration</td>
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<tr>
<td>SSI10</td>
<td>V</td>
<td>F</td>
<td>34</td>
<td>Processing</td>
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Focus groups

<table>
<thead>
<tr>
<th>Occupations</th>
<th>Ages</th>
<th>Gender</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers</td>
<td>2</td>
<td>18-30</td>
<td>12 Male</td>
</tr>
<tr>
<td>PAFCO Security workers</td>
<td>1</td>
<td>31-50</td>
<td>10 Female</td>
</tr>
<tr>
<td>PAFCO workers</td>
<td>18</td>
<td>50</td>
<td>8 TOTAL</td>
</tr>
<tr>
<td>Home makers</td>
<td>3</td>
<td>TOTAL</td>
<td>30</td>
</tr>
<tr>
<td>Business owners</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labourers</td>
<td>1</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Key Informants

<table>
<thead>
<tr>
<th>Key</th>
<th>Name</th>
<th>Age</th>
<th>Gender</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>KI1</td>
<td>P</td>
<td>31</td>
<td>M</td>
<td>PAFCO worker</td>
</tr>
<tr>
<td>KI2</td>
<td>N</td>
<td>52</td>
<td>M</td>
<td>Business Owner</td>
</tr>
<tr>
<td>KI3</td>
<td>V</td>
<td>34</td>
<td>F</td>
<td>PAFCO worker</td>
</tr>
</tbody>
</table>
Appendix 2: Ethics Form

Faculty Of Technology, Design & Environment, Oxford Brookes University
ARCHITECTURE / PLANNING / REAL ESTATE & CONSTRUCTION

RESEARCH ETHICS FORM E1BE FOR STUDENTS ON TAUGHT COURSES
Please read the Guidance Notes at www.brookes.ac.uk/res/ethics/forms

Section A - You & your project
What is your name?
First name: CLARE
Surname: DEACON

What is your student number?
101100 480

What is your email address?
10100 480@brookes.ac.uk

What is your supervisor's name?
First name: SUPRIYA
Surname: SAKKEKAR

What is your supervisor's email address?
Supriya@brookes.ac.uk

In which Department are you studying?
Performing/Management group
Planning
REC

What course are you taking?
MA Development: Emergency Planning

What is the topic area of your research?
PACIFIC ISLANDS DEVELOPMENT

On what kinds of topics will you be collecting data from the participants in the research?

Section B - Your participants
What kind of participants will be involved in your research? (Please tick one – if more than one, then complete a separate form)

Members of the general public
Vulnerable individuals

Briefly describe these participants
COMMUNITY IN FISH, AFFECTED BY SEA-FRONTING LOSS

How many participants will be involved?
40

Number of people

How will the participants be selected?

Section C - Your data collection
When is your data collection likely to start?

Section D - Declaration
I declare that I will

Student signature: 
Date: 15/05/12

Supervisor signature: 
Date: 15th May 2012

Module Leader signature: 
Date: 15th May 2012

You may only start fieldwork when this form has been signed by your supervisor & your Module Leader.
References


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Sanderson, D (2012) Building livelihoods to reduce risk among the most marginalized in urban areas: Strategic approaches from Dhaka, Environmental Hazards, Vol 11, 2, p112-122


UN-OHRLLS (2002) *Summary of Statements by SIDS Leaders at the Plenary of the 2012 Third World Summit on Sustainable Development (RIO+20)*, UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States [Website] Available from:

http://islands.unep.ch/dsidsconf.htm#Resolution_1 (Accessed: 9th August 2012)

UN (2005) *International meeting to Review the implementation of the Programme of Action for the sustainable development of Small island developing states*, Port Louis Mauritius, 10-14 January, [Online] Available from:


