

# KTA Livelihoods Project: Scoping Study

Review and recommendations for future  
livelihoods activities

## Final Report



The Livelihoods Project is administered by the Kokoda Track Authority (KTA) on behalf of the Kokoda Initiative (KI). The Livelihoods Project aims to increase the capacity of Kokoda Track communities to generate income from tourism by adding value to the trekking experience. The Scoping Study Terms of Reference has two distinct objectives, namely to: (1) evaluate the previous design and implementation of the Livelihoods Project since 2011 against its objectives, and (2) present KTA with a set of clear, feasible and empirical recommendations (at the project design, delivery mechanism and activity levels) to enable delivery of a successful and sustainable livelihoods project that would bring services or benefits to local communities and trekkers.

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## Executive Summary

### 1. Background

The Livelihoods Project is administered by the Kokoda Track Authority (KTA) on behalf of the Kokoda Initiative (KI). The Livelihoods Project aims to increase the capacity of Kokoda Track communities to generate income from tourism by adding value to the trekking experience. The Scoping Study Terms of Reference has two distinct objectives, namely:

- **To evaluate the previous design and implementation of the Livelihoods Project** since 2011 against its objectives.
- **To present KTA with a set of clear, feasible and empirical recommendations** (at the project design, delivery mechanism and activity levels) to enable delivery of a successful and sustainable livelihoods project that would bring services or benefits to local communities and trekkers.

### 2. Methodology

Prior to commencing the study, an agreed framework for conducting the evaluation and strategy development work was assembled with KTA counterparts; outlining the study methodology and implementation arrangements. Study activities were guided by the Sustainable Livelihoods Framework which assisted the survey team to focus on community resources, transforming structures and processes (internal and external), and strategies for realizing desired outcomes. The field work along the Kokoda Track was undertaken by 2 survey teams over 11 consecutive days within 8 wards. This was followed by face-to-face consultations with key stakeholders in Port Moresby and email communication with tour operators overseas. Over 500 people were consulted (67% male and 62% landowner).

### 3. Livelihoods Context

The Kokoda Track runs for approximately 96 kilometres in a north-easterly direction across the Owen Stanley Ranges from Owers' Corner (Central Province) to Kokoda (Oro Province). There are two distinct language groups within the track area, namely: the Koiari people (Central Province) and the Orokaiva people (Oro Province). Within this context, the field surveys revealed 3 different situations described below:

- **Areas with road access** comprising around 6 villages in Central Province and 12 villages in Oro Province which lie within 1 hour walking distance from a road that leads to the district and/or provincial capital. These sites have good connections to provincial markets and services, as well as productive soils and high land potential.
- **Areas with airport access** comprising around 9 villages in Central Province which lie within 1 hour walking distance from an airport (and have no road access). These sites have intermittent and costly connections to district and/or provincial markets and services, as well as lower land potential due to environmental constraints such as poor soils, long dry season and steep slopes.
- **Areas with neither road nor airport access** comprising around 7 villages in Central Province and 7 villages in Oro Province. These sites have difficult connections to both district and provincial markets and services, as well as lower land potential due to environmental constraints such as poor soils, long dry season and steep slopes.

#### 4. Livelihoods Project: *Progress to-date*

The Livelihoods Project was assessed with reference to standard project assessment criteria namely:

- **Relevance:** Is the Livelihoods Project consistent with the needs of local communities and the trekker market, as well the policies and priorities of key local, national and international stakeholders?
- **Efficiency:** Are the Livelihoods Project resources (physical and non-physical) being converted into the desired outputs in the most economical manner?
- **Effectiveness:** To what extent have the Livelihoods Project's planned outputs and objectives been achieved?
- **Impact:** Is the Livelihoods Project making a contribution towards its long-term development goal, as well as influencing the development approaches of other agencies?
- **Sustainability:** Are the Livelihoods Project outputs likely to be used and/or developed after the implementation phase has been completed?

This section of the report contains specific recommendations for future livelihoods activities with reference to the project's annual work plans and reports, the livelihoods context and the stakeholder consultation findings.

#### 5. Livelihoods Project: *Future Scope*

Future strategies for the Livelihoods Project were then developed with reference to the 5 key factors that relate to sustainable livelihoods initiatives, namely:

- **Opportunities and threats:** How can the Livelihoods Project help local community groups to become more resilient to external threats, and take advantage of any relevant opportunities?
- **Strengths and weaknesses:** How can the Livelihoods Project help local community groups to build on their relevant strengths and address or avoid any critical weaknesses?
- **Supportive and limiting structures and processes:** How can the Livelihoods Project involve / support appropriate organizations (local and external), as well as recognize the various rules and procedures (government and community) that are in place?
- **Short and long-term strategies:** How can the Livelihoods Project help local community groups to make use of their available resources to realize their ...
- **Desired social, environmental and economic outcomes?**

Scoring was first used to facilitate the identification of potential “entry points” for future livelihoods activities with reference to the 3 different locations (i.e. Areas 1, 2 and 3). The overall assessment revealed:

- **3 Income Generation Markets** comprising (i) Tourism, (ii) Agriculture, and (iii) Payments for Environmental Services;
- **4 Project Outputs** comprising (i) Project Management Framework, (ii) Community Resource Centres, (iii) Finance Support Services, and (iii) Transport Support Services;
- **3 Cross Cutting Issues** comprising Climate Change, (ii) Social Issues, and (iii) Political Trends.

Each entry point listed above was then considered in more detail with reference to the livelihoods context, the project review findings, the stakeholder consultations, and the available literature. This section of the report contains specific conclusions and recommendations for each proposed entry-point with reference to the key livelihoods factors listed above.

## 6. Conclusions and Recommendations

### 6.1 Progress to-date

The main conclusions with regards to project design & delivery since project inception in 2011 are:

- **Project Relevance** is high with regards to: (i) international, national, provincial and local level policies and priorities, (ii) other organizations working along the KT, and (iii) the priority needs of KT communities and trekkers. Whilst the project contributes directly to KI Goal 2, during the period 2011-2013, only around 1% of KI expenditure went to income generation activities and 21% went to basic services (mostly health and education) along the track through KDP.
- **Project Efficiency** converting inputs to outputs has been limited by: (i) project management capacity, (ii) administrative constraints in Port Moresby and (iii) inadequate training, resources and support services for CBMs in the field. Overall, activities are around 46% completed with 28% of funds unspent.
- **Project Effectiveness** delivering outputs has been partly delayed by manufacturing issues and trainer/trainee availability. The planned CBM capacity building activities are around 10% complete which has also affected overall performance. No outputs have been completed. Landowners are willing to participate, but becoming increasingly discouraged by slow progress.
- **Project Impact** is hard to assess with no outputs fully delivered. However, the guesthouse certification programme looks promising with operators making good use of their trainings and resources. CBMs are not working to full potential, since their planned trainings have not been completed. Overall, tourism is having both positive and negative social impacts along the track.
- **Project Sustainability** relates to output type. Low input, market driven enterprises with a reasonable return to labour (e.g. basic physiotherapy services) are most likely to be sustained and replicated. High external input operations (e.g. community sawmills) are less likely to be successful. Ongoing support is needed for CBM and guesthouse certification activities.

This section of the report contains specific recommendations for future livelihoods activities with reference to the 5 evaluation criteria listed above.



## 6.2 *Future scope*

### 6.2.1 **Market Opportunities**

The main conclusions with regards to market opportunities are:

- **Tourism** has (i) moderate potential in Area 1 (end of track) and (ii) high potential in Areas 2 and 3. Potential markets for the future include Japanese trekkers and the domestic market, such as short distance trekkers and fly-in fly-out tourists who prefer to stay longer at one central location.
- **Agriculture** has (i) high potential in Area 1 (productive soils and good market access), (ii) moderate potential in Area 2 (limited land potential and limited market access), and (iii) low potential in Area 3 (limited land potential and no market access).
- **Payments for Environmental Services** have good potential since (i) the KT area provides significant water catchment and conservation (biodiversity and heritage) services to the government and tourism sectors, and (ii) there is a credible threat of environmental degradation.

This section of the report contains specific recommendations for future livelihoods activities with regards to: (i) aligning community resources with market opportunities, (ii) aligning transforming structures and processes (internal and external) with market opportunities, and (iii) potential income generation strategies for each market opportunity.

### 6.2.2 **Proposed Outputs**

The main conclusions with regards to the proposed project outputs are:

- **Project Management Framework** should provide a combined “bottom-up and top-down” project delivery mechanism that bridges the gap between the project’s external and local level stakeholders. The CBM network has potential to provide important community liaison and communication services.
- **Community Resource Centres** should increase village resident access to information, communication and extension services. Each centre should be equipped with attractive and appropriate tools and technologies for local CBMs (i.e. village based extension officers) to use and share.
- **Finance Support Services** should reduce financial constraints for feasible income generation enterprises along the track; providing communities with project funding in a way that combines community ownership and commitment with small business training and support.
- **Transport Support Services** should reduce provincial market access constraints for feasible agricultural enterprises in Area 2. This is likely to involve farmers from one location supplying a single market in Port Moresby; in a way that combines community organisation and commitment with small business training and support.

This section of the report contains specific recommendations for future livelihoods activities with regards to: (i) income generation constraints, and (ii) implementation strategies.

### 6.2.3 Cross Cutting Issues

The main conclusions with regards to the cross cutting issues are:

- **Climate Change** has the potential to undermine rural livelihoods in many parts of PNG through sea level rise, temperature increases, higher rainfall and possibly more extreme climatic events. Whilst the effects of climate change in PNG have been small so far, there is no reason for the Livelihoods Project to be complacent.
- **Social Issues** should be alleviated through improved access to income generation services and opportunities. However, tourism activities along the track are also producing some unintended and undesirable effects within participating households, villages and the wider community. The Livelihoods Project should not be complacent with regards to social issues.
- **Political trends** usually influence sustainable forest management practices. Forest governance involves local, national, regional and global structures and processes, which implies that forest management decision-making is usually complex, and prone to misunderstanding and disagreement. The Livelihoods Project should not be complacent with regards to political trends.

This section of the report contains specific recommendations for integrating cross-cutting issues into project activities.

## 7. What Next?

Livelihoods Project activities to-date have had a restricted scope; focusing more on delivering one-off training sessions and income generation projects than on creating an “enabling environment” for the future. This top-down approach has had limited success. The scoping study findings suggest the project scope be considerably broadened; allowing a combined “bottom-up and top-down” project delivery mechanism that focuses on business development needs and market opportunities. This means the scoping study has laid the foundations for a project design process; rather than completed a cost-benefit analysis for future trainings and income generation projects. This section of the report provides some recommended steps for completing the project design phase using a participatory, step-by-step approach that further engages landowners, key stakeholders and industry representatives, leading to:

- **An acceptable and realistic work programme** for diversifying local enterprises and enhancing food security, tourism opportunities and forest conservation within the Kokoda Track area;
- **A team of well-connected project partners** who are committed to collaborate on future livelihoods activities.

## Abbreviations

ACIAR	Australian Centre for International Development
AusAID	Australian Agency for International Development
CBM	Community Based Mentor
CRC-SI	Australian Cooperative Research Centre for Spatial Resource
DEC	Department of Environment and Conservation
DFID	Department for International Development (United Kingdom)
DoH	Department of Health
DOTE	Department of the Environment
DSIP	District Services Improvement Program
FPDA	Fresh Produce Development Agency
FPIC	Free, Prior and Informed Consent
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
ILG	Incorporated Land Group
IPZ	Interim Protection Zone
ITTO	International Tropical Timber Organisation
KAP	Knowledge, Attitudes and Practices
KDP	Kokoda Development Programme
KI	Kokoda Initiative
KPI	Key Performance Indicator
KT	Kokoda Track
KTA	Kokoda Track Authority
KTF	Kokoda Track Foundation
LJS	Law and Justice Sector
LLG	Local Level Government
NADP	National Agriculture Development Plan (2007-2016)
NARI	National Agricultural Research Institute
NEC	National Executive Council



NGO	Non-Governmental Organisation
OCCD	Office for Climate Change and Development
PES	Payments for Environmental Services
PIP	Pacific Island Projects
PNG	Papua New Guinea
PNGFA	PNG Forest Authority
REDD	Reduced Emissions from Deforestation and Degradation
RFQ	Request for Proposals
SDA	Seventh Day Adventist (Church)
SBDC	Small Business Development Corporation
ToR	Terms of Reference
TPA	Tourism Promotion Authority
UN	United Nations
USA	United States of America
VHF	Very High Frequency
WD	Wheel Drive

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## 1. Background

In 2003, the Kokoda Track Authority (KTA) was established as a Special Purposes Authority under PNG’s Local-level Governments Administration Act (1997). Through this arrangement, KTA is commissioned to promote and manage the Kokoda Track for tourists, while improving the way of life for communities living along the track, through funding and development programmes.

The Livelihoods Project was initiated in 2010, as part of the joint PNG-Australia “Kokoda Initiative” which supports sustainable development in the Kokoda Track region, Owen Stanley Ranges and Brown River Catchment areas. The Livelihoods Project is administered by KTA on behalf of the Kokoda Initiative (KI). The project aims to increase the capacity of Kokoda Track communities to generate income from tourism by adding value to the trekking experience. Since its inception, KTA has initiated a variety of activities aimed at increasing income-generating opportunities and capacity building of the local communities. The Livelihoods Project’s scoping study has 2 distinct objectives, which are to:

1. Evaluate the previous design and implementation of the Livelihoods Project since 2011<sup>1</sup> against its objectives.
2. Present KTA with a set of clear, feasible and empirical recommendations (at the project design, delivery mechanism and activity levels) to enable delivery of a successful and sustainable livelihoods project that would bring services or benefits to local communities and trekkers.

The scoping study’s Terms of Reference (Annex 9.1, page 109) required the selected consultants to review the specified literature, as well as undertake extensive consultations with key stakeholders (Annex 9.6, page 120) and selected communities along the Kokoda Track area (Annex 9.4-9.5, page 105). This included consideration of important elements such as gender, social customs and location.

## 2. Methodology

Prior to commencing the study, an agreed framework for conducting the evaluation and strategy development activities was prepared in consultation with KTA team members. The Framework Document v.5 (Annex 9.2, page 111) outlines the scoping study parameters, namely: the objectives, deliverables, methodology, implementation plan and budget estimate. Sections 2.1 to 2.4 present the scoping study’s approved methodology, namely: the study approach, tools, sites, participants, activities and outputs.

### 2.1. Approach

The scoping study was guided by the Sustainable Livelihoods Framework (Figure 1, page 2) which enabled a holistic, people-centred approach that focused on important issues and their relationships with one another. In this way, the scoping study was aligned with the DFID’s (1999) definition of a sustainable livelihood, as comprising:

*“The capabilities, assets and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.”*

<sup>1</sup> The Livelihoods / Micro-business Support Project (Pilots 1 and 2) was implemented during 2010 and is therefore beyond the scope of this evaluation. Annex 9.9 (page 122) contains the 2011 Evaluation Report.

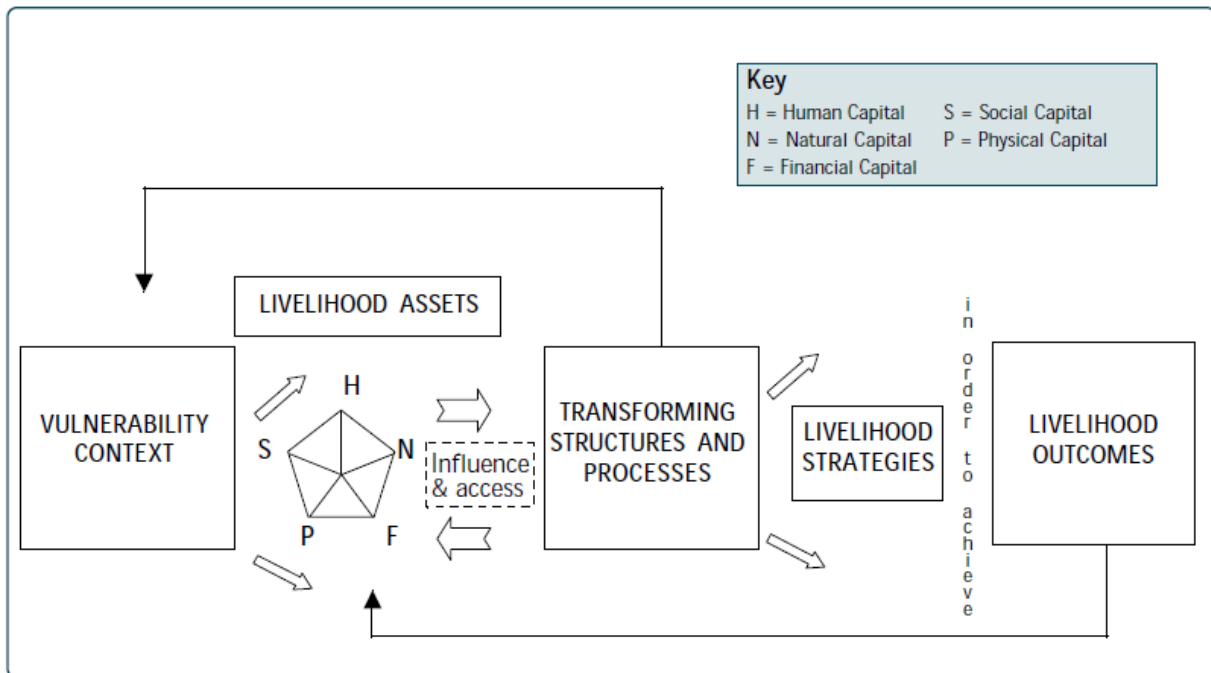


Figure 1: The Sustainable Livelihood Framework (sourced from DFID, 1999)

## 2.2. Tools

The survey tool-kit included Survey Guidelines (Annex 9.3, page 114) outlining community entry protocols, survey techniques and survey tools.

Table 1 presents the survey forms that were developed to collect a set disaggregated data from project beneficiaries and stakeholders in Port Moresby and along the Kokoda Track. The different forms allowed cross-checking of data amongst the various study participants.

Table 1: Study tools used during the scoping study.

Tools	Participants	Data type
Group Discussion Form	Key village groups (e.g. clan, women's and youth groups)	Objective 2
Household Survey Form 2	Village residents (but not project beneficiaries)	Objective 2
Knowledge, Attitudes and Practices (KAP) Form <sup>2</sup> / Infrastructure and Safety; Income generation; Community Development sections	Village residents	Baseline data on infrastructure and safety; income generation, community development; stories of change
Stakeholder Form	Secondary stakeholders (public and private sectors)	Objective 1 and 2
Tourism Entrepreneur Form	Local tourism entrepreneurs (e.g. guest house owners)	

<sup>2</sup> Provided by the Kokoda Initiative



**Table 1:** Study tools used during the scoping study (continued).

Tools	Participants	Data type
Tourism Employee Form	Local tourism employees (e.g. guides and porters)	Objective 1 and 2
Tour Operator Form	Tour operators	Objective 2
Trekker Form	Trekkers	Objective 2
Village Profile Form	Ward Councillor with Ward Development Committee members	Baseline data on village demographics, infrastructure, land cover and land ownership

### 2.3. Sites and Participants

The scoping study consulted with over 450 people face-to-face in Port Moresby and along the Kokoda Track. An additional 69 tour operators were contacted via email. Figures 2 and 3 show the different types of people that took part in the study (i.e. participated in the completion of a form). Annexes 9.4 to 9.6 (page 115) provides the participant details.

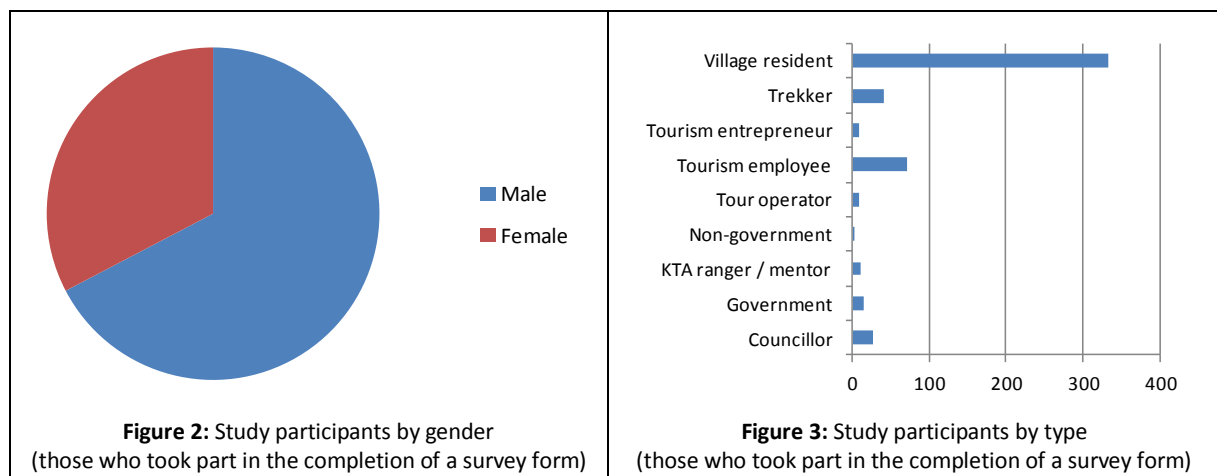


Table 2 (below) and Table 3 (page 4) present the sample sites along the Kokoda Track that were selected by KTA. Villages in italics represent additional sites that were selected en route. Figure 5 (page 5) shows the location of each village along the Kokoda Track.

**Table 2:** Selected study sites in Oro Province

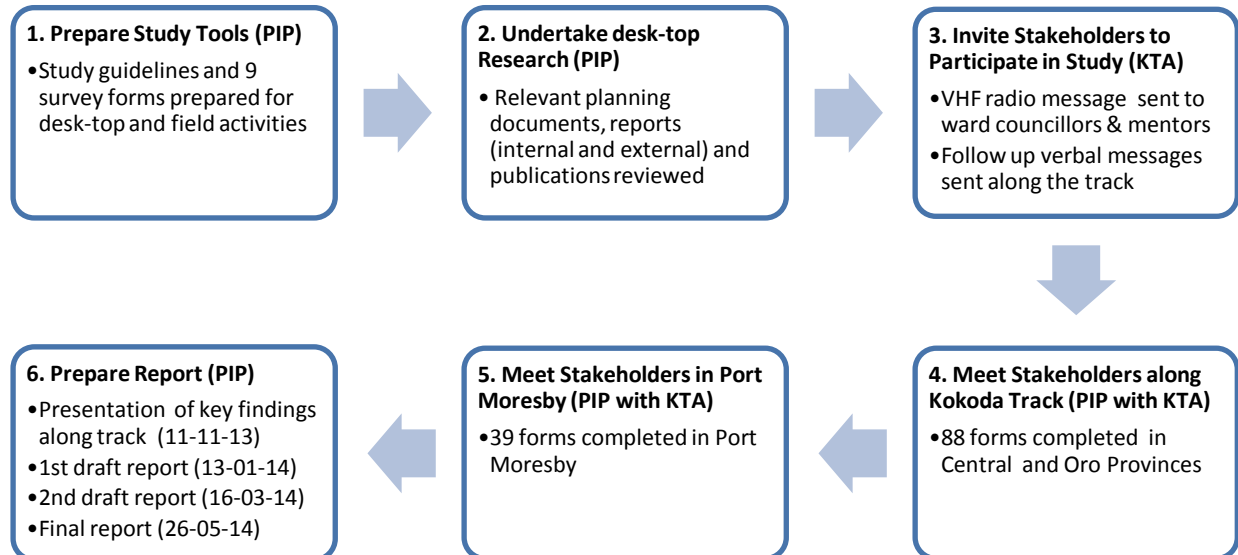
Province	LLG	Ward	Village(s)	Study status	Study team
Oro	Kokoda	9	Alola	Study completed	Betty Haiverava-Laufa (PIP) with support from Rapsey Vagi, Peter Okwechime and Reuben Maleva (KTA)
		9	Isurava	Study completed	
		2	Hoi	Visited	
		2	Kovelo	Study completed	
		5	Kokoda Station (District HQ)	Study completed with Kokoda LLG councillors	
		2	Savaia	Visited	

**Table 3:** Selected study sites in Central Province

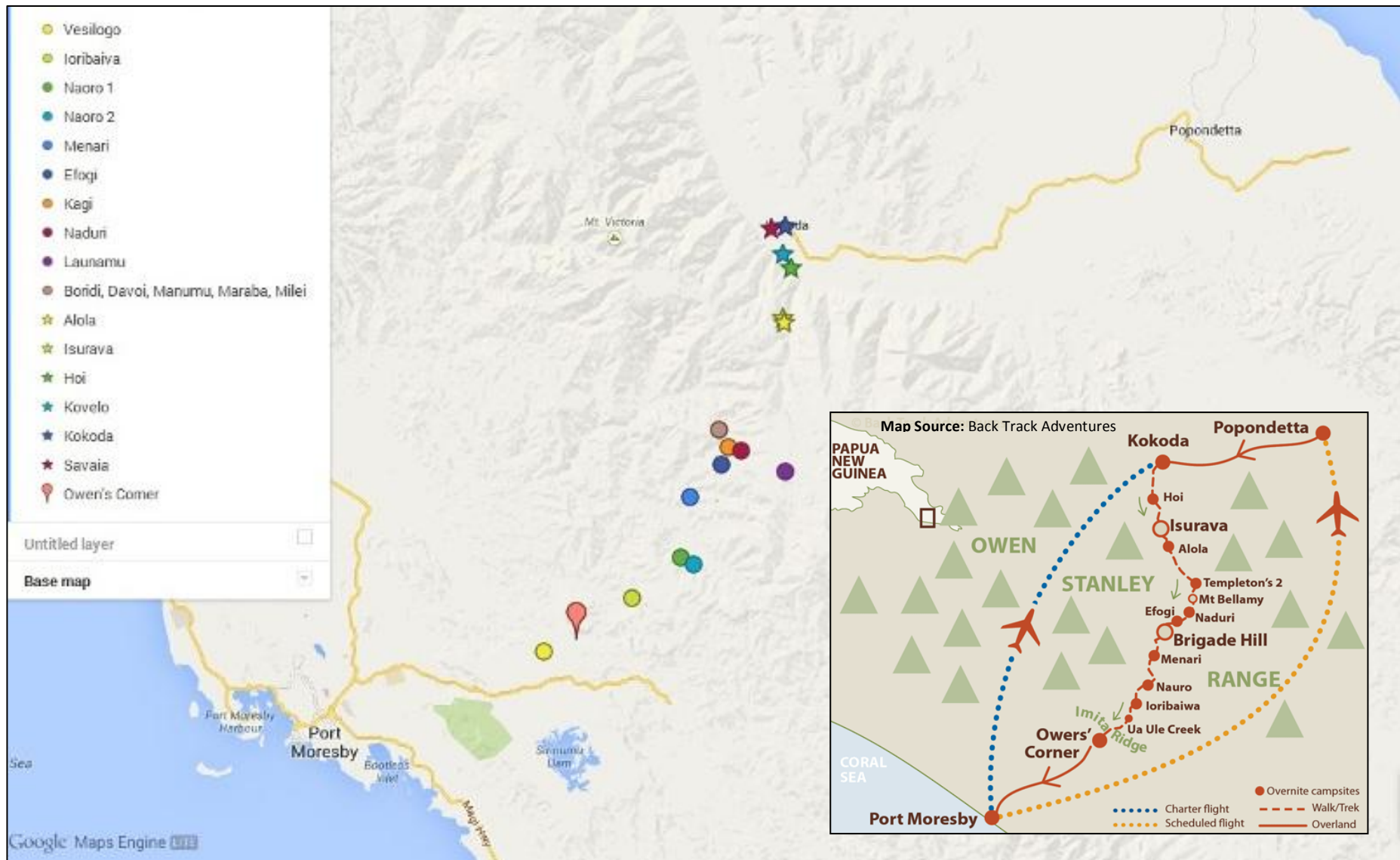
Province	LLG	Ward	Village(s)	Study status	Study team
Central	Koiari	15	<i>Boridi, Davoi, Manumu, Maraba and Milei</i>	Study completed	Simon Rollinson (PIP) with support from Hollen Mado and Robert Batia (KTA)
		16	Kagi	Study completed	
			Naduri	Study completed	
		17	Efogi No 1 and 2	Study completed	
		18	Manari	Study completed	
			Nauro 1	No participants	
			Nauro 2	Study completed	
			<i>Ioribaiva</i>	No participants	
		6	Vesulogo	Study completed	

## 2.4. Activities and Outputs

Figure 4 outlines the agreed implementation plan and responsibilities for the study period, together with the actual outputs for each activity.



**Figure 4:** Study activities, responsibilities and outputs.



**Figure 5:** Map of study area showing major roads, provincial capitals and location of the 16 sample sites in Central Province (circles) and Oro Province (stars) (created in Google Maps: click on link to examine online <https://mapsengine.google.com/map/edit?mid=zQFLiRrbkJI.k7mLwuyppgym>).

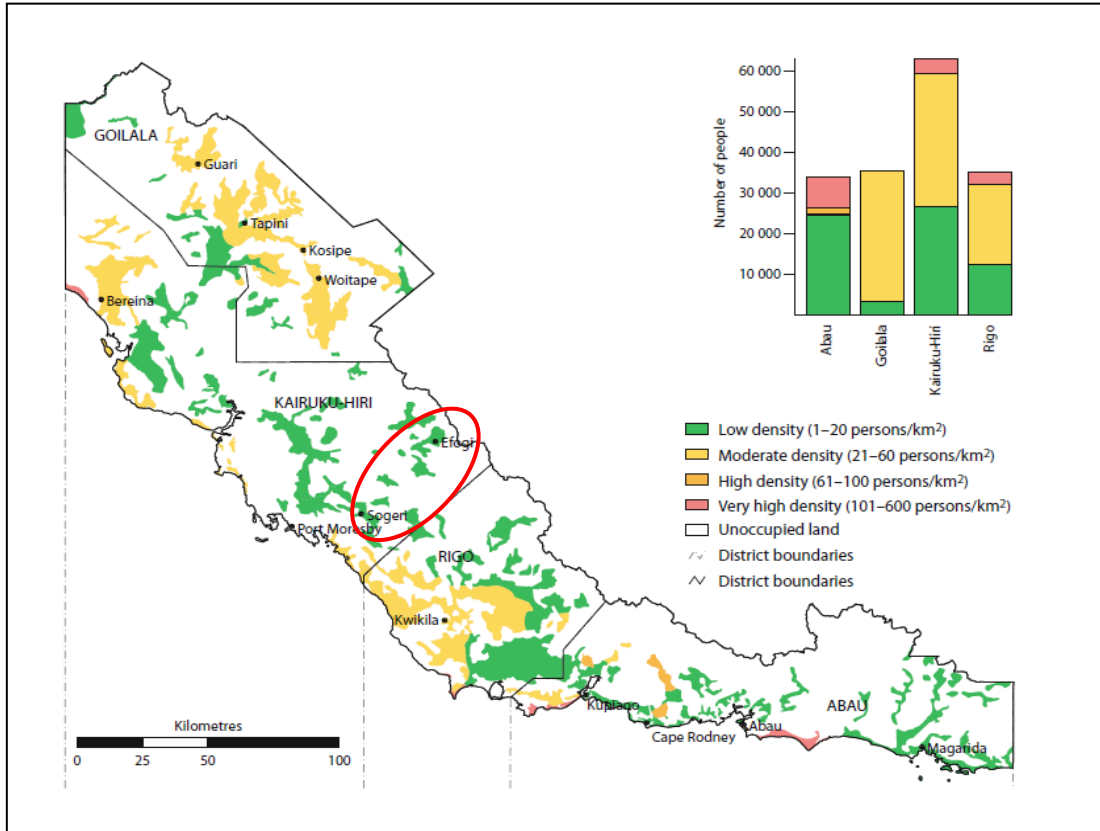


Figure 6: Map of Central Province showing district boundaries, population densities, and the study area circled in red. Sourced from Hanson et al. (2001)

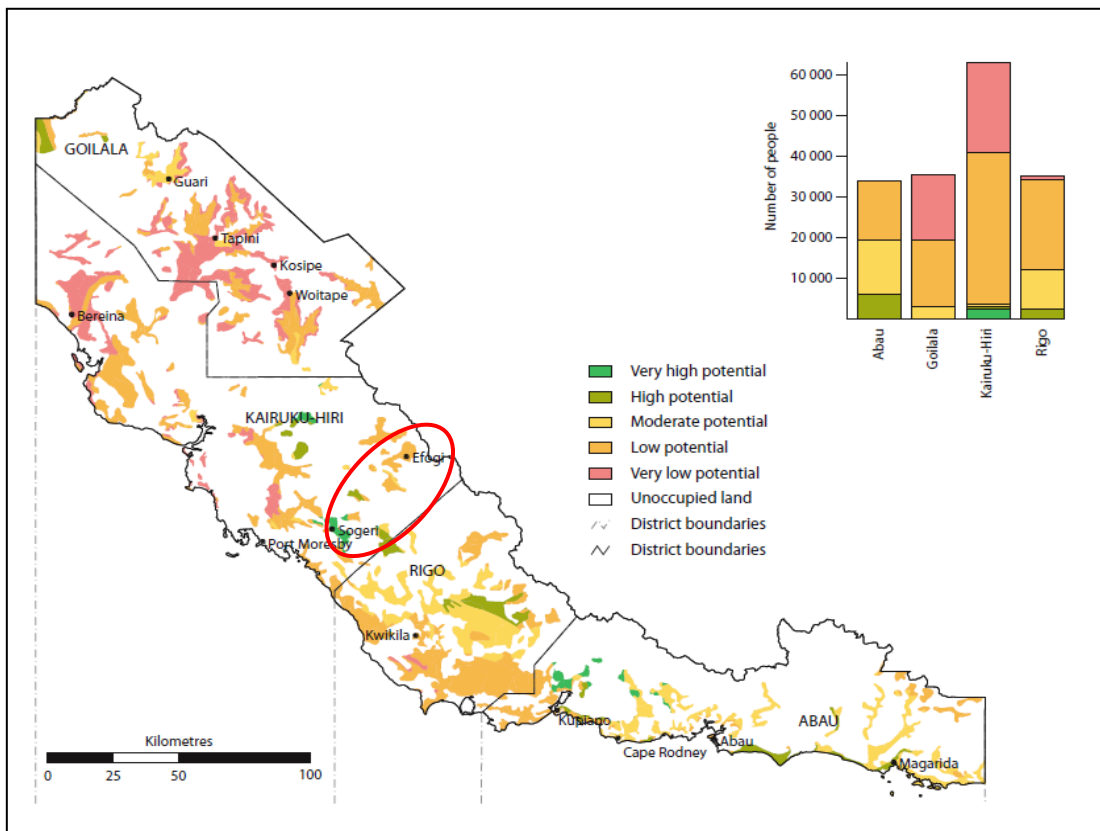


Figure 7: Map of Central Province showing district boundaries, occupied land potential, and the study area circled in red. Sourced from Hanson et al. (2001)

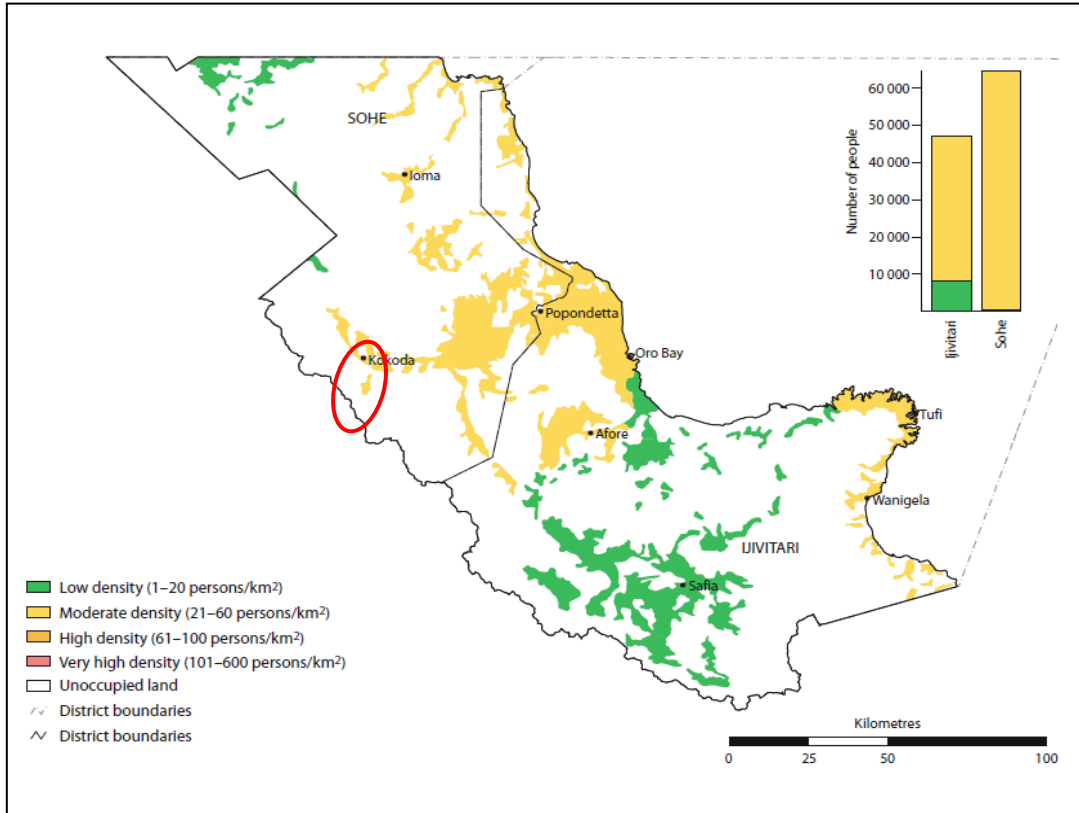


Figure 8: Map of Oro Province showing district boundaries, population densities, and the study area circled in red. Sourced from Hanson et al. (2001)

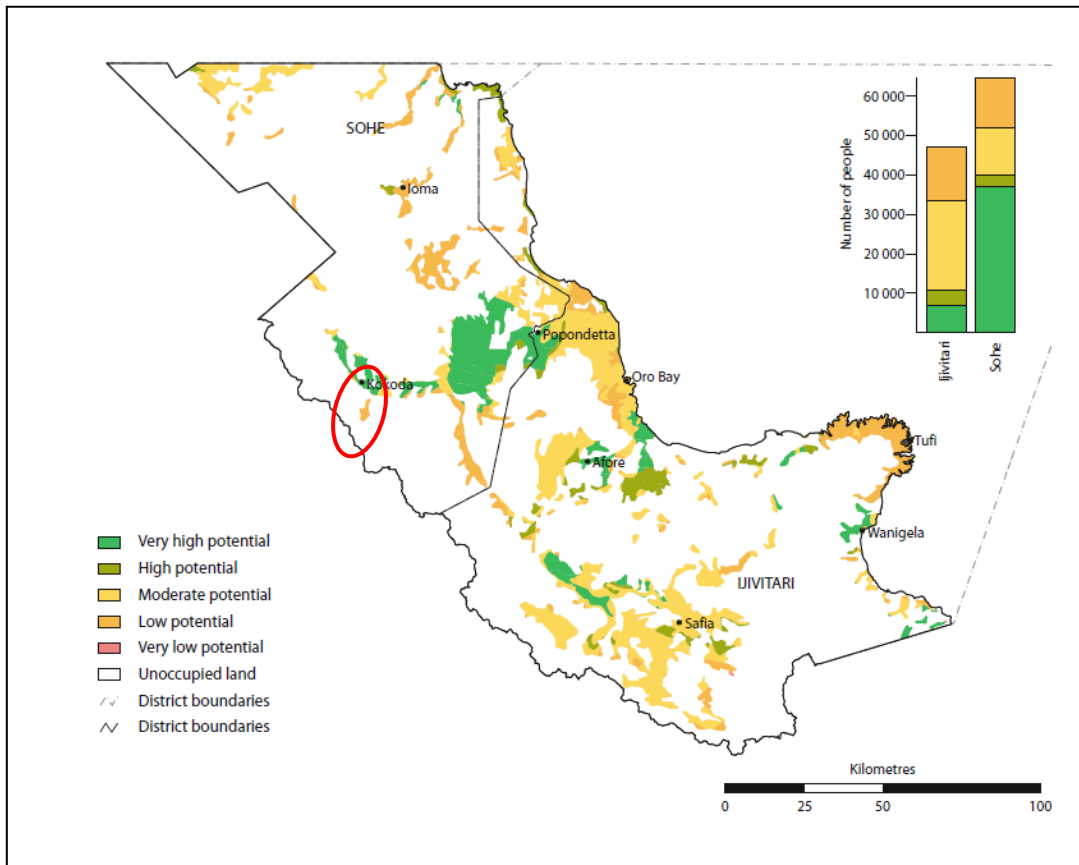


Figure 9: Map of Oro Province showing district boundaries, occupied land potential, and the study area circled in red. Sourced from Hanson et al. (2001)



### 3. Livelihoods Context

The Kokoda Track runs in a north-easterly direction across the rugged Owen Stanley Ranges; extending approximately 96 kilometres from Owers’ Corner in Central Province to Kokoda Township in Oro Province (Figure 5, page 5). The livelihoods context within the track area is strongly influenced by altitude, rainfall and landform (including soil type). There are also two distinct ethno-linguistic branches of the Trans New Guinea language family within the track area, namely: the Koiari people from Central Province and the Orokaiva people from Oro Province. The Koiari branch comprises three language groups, namely: Grassland Koiari, Mountain Koiari and Koitabu (outside track area) (Wikipedia, 2013). Important land-use decisions are usually made at the clan level, with clan leadership passed down from father to eldest son (or eldest male cousin if no son).



The south-west part of the track (Figures 6 and 7, page 6) is located within the Koiari LLG area of Kairuku-Hiri District (Central Province); running from the Sogeri plateau’s fertile volcanic soils to the less productive inland ranges. Population densities are low, access to services varied and income levels moderate. Altitudes range from around 600 metres to 4,000 metres on Mt Victoria. Rainfall averages around 3000 mm/year, with a long dry season from April to November. Overall, the Koiari people living along the south-west portion of the track are seriously disadvantaged relative to people in other parts of PNG (Hanson et al., 2001). There is a significant out-migration of landowners to Port Moresby seeking better services and employment opportunities.

The north-west part of the track (Figures 8 and 9, page 7) is located within the Kokoda LLG area of Sohe District (Oro Province); running from the Mambare Valley’s fertile volcanic plains to the less productive inland ranges. Population densities are moderate with most people residing around Kokoda and the Mambare Valley, where access to services is good. Altitudes range from around 400 metres to 4,000 metres on Mt Victoria. Rainfall averages around 4,000 mm/year. Overall, the Orokaiva people living along the north-east portion of the track are not disadvantaged relative to people in other parts of PNG (Hanson et al., 2001).

Sections 3.1, 3.2 and 3.3 present our overall assessment of the livelihoods context from the community perspective at the sample villages in Central and Oro Provinces with reference to the:

- **Assets / resources** that are available for people to use;
- **Structures and processes** that either support or limit people’s ability to use these resources;
- **Strategies** that communities are using now to realize their livelihood objectives, together with their proposed strategies for realizing their desired outcomes in the future.

### 3.1. Sites with Road Access (Area 1)

Within the track area, there are around 6 villages in Central Province and 12 villages in Oro Province which lie within 1 hour walking distance from a road that leads to the district and/or provincial capital. These sites have good connections to provincial markets and services, as well as productive soils and high land potential.

Sections 3.1.1 and 3.1.2 present our baseline findings from the 2 sample villages with road access in Central and Oro Provinces.

#### 3.1.1. Central Province

Table 4 presents our baseline findings from the sample village along the Sogeri plateau.

**Table 4:** The present situation at Vesulogo village.

1. VESULOGO VILLAGE	
KOIARI LLG; WARD 6 (Waule, Girinumu, Salvation Army, Moenaro, Vesulogo)	
<u>Livelihood Assets</u>	
<p><b>Financial resources:</b> Vesulogo village residents have a variety of income sources including:</p> <ul style="list-style-type: none"> <li>• Tourism related activities, mostly portering and market sales at Owers’ Corner (e.g. bilums, food), as well as track maintenance payments and ward development grants from KTA);</li> <li>• Cash cropping (rubber and ginger);</li> <li>• Market sales (mostly fruit and vegetables) at Sogeri and Port Moresby markets;</li> <li>• Local employment, town employment and local businesses (poultry and trade stores);</li> </ul> <p>Some village residents have access to formal credit services in Port Moresby.</p>	
<p><b>Figure 10: Main sources of village income</b></p>	<p><b>Figure 11: Village resident access to credit</b></p>
<p><b>Human resources:</b> Vesulogo village was established around 65 years ago. The current population is around 500 (60 households). There are also around 20 families permanently residing in Port Moresby.</p> <p>The village population comprises local landowners (around 50% of population) together with settlers from other areas brought in before and after independence to work on the nearby plantations and sawmills. The Koiari language is being spoken less and less due to inter-marriages, settlers and proximity to Port Moresby; being replaced over time by Hiri-Motu and Tok-Pisin.</p> <p>Education levels within the village are low with only 20 secondary qualifications. Primary industry work experience is high due to local logging operations (before 1993) and rubber. The village lies along the sealed road to Sogeri so tourism work experience is mostly restricted to tour guiding, portering and market sales to trekkers, tour guides and porters at Owers’ Corner.</p>	

**Table 4:** The present situation at Vesulogo village (continued).

<b>Livelihood Assets (continued)</b>	
<p><b>Figure 12:</b> Village resident age groups</p>	<p><b>Figure 13:</b> Village residents and Port Moresby residents</p>
<p><b>Figure 14:</b> Village resident qualifications</p>	<p><b>Figure 15:</b> Village resident work experience</p>
<p><b>Natural resources:</b> Vesulogo is located around 600m. above sea level. Around 50% of village residents are local landowners comprising 4 clan groups. Around 75% of their land has been alienated by the state during the colonial period for agricultural purposes, with most of this land now managed by the Koitaki Beef company. Land cover comprises savannah, degraded grasslands and some forest.</p>	
<p><b>Figure 16:</b> Land cover</p>	<p><b>Figure 17:</b> Land ownership</p>
<p><b>Physical resources:</b> Vesulogo village residents have access to:</p> <ul style="list-style-type: none"> <li>• Sealed road with regular bus services from Owers' Corner to Port Moresby.</li> <li>• The Vesulogo elementary school is incomplete. KDP has provided imported construction materials, but the village sawmill has not yet provided the timber. The nearest elementary school is at Bisiababu.</li> <li>• Lower primary, upper primary and secondary schools at Sogeri (5km bus journey).</li> <li>• The nearest aid post is at Salvation Army (poor condition). There is a district health centre at Sogeri (5km bus journey).</li> <li>• Village VHF radio for communication with KTA, as well as reliable mobile network (Digicel and B Mobile).</li> <li>• Clean, piped water from a gravity fed system (funded by Community Development Scheme).</li> </ul> <p>Each household is responsible for securing its own power supply. Around 75% of households have a genset.</p>	

**Table 4:** The present situation at Vesulogo village (continued).

<b>Livelihood Assets (continued)</b>	
<p><b>Figure 18:</b> Access to markets and services</p>	<p><b>Figure 19:</b> Access to reliable power supply</p>
<b>Structures and Processes</b>	
<p><b>External structures and processes:</b> The residents of Vesulogo interact with some external agencies, including:</p> <ul style="list-style-type: none"> <li>• <b>AusAID:</b> Community Development Scheme (now Strongim Pipol Strongim Nesen Program) has assisted with the gravity fed water supply system.</li> <li>• <b>Kokoda Development Program:</b> KDP has provided materials for the elementary school, and bedding and materials for the aid post.</li> </ul> <p><b>Kokoda Track Authority:</b> The nearest KTA ranger is based in Owers’ Corner. The ranger was not present during the study. The KTA track maintenance program and ward development grants provide an unreliable source of income each year (i.e. not received every year). The Livelihoods / Micro-business Support Project has provided 2 basic business/financial management trainings for CBMs. The current Livelihoods Project has not yet worked with Vesulogo village residents.</p> <ul style="list-style-type: none"> <li>• <b>Kokoda Track Foundation:</b> KTF has provided elementary school materials, and some student sponsorships to technical, teaching and nursing institutions in Port Moresby.</li> <li>• <b>National government:</b> The member for Kairuku-Hiri District is based in Port Moresby.</li> <li>• <b>National Agricultural Research Institute:</b> Established some vegetable farming research plots (e.g. carrot, eggplant, cabbage, cauliflower) but nothing has happened since project completion recently.</li> <li>• <b>Sub-national government:</b> The Koiari LLG office, Kairuku-Hiri District headquarters, and the Central Province Administration are all based in Port Moresby. Overall, village residents have limited access to the District Service Improvement Program. Government regulations that restrict landowner ability to use their resources are also minimal.</li> <li>• <b>Church denominations:</b> The 3 main church groups at Vesulogo are the Seventh Day Adventist Church (50%), Salvation Army (30%) and PNG Bible Church (20%).</li> <li>• <b>Tour Companies:</b> Collaboration with tour companies is minimal.</li> </ul> <p><b>Internal structures and processes:</b> The residents of Vesulogo also interact with some important internal structures and decision-making processes:</p> <ul style="list-style-type: none"> <li>• <b>Clan Groups:</b> Landownership issues are dealt with by the leaders of the 4 patrilineal clan groups. There are no significant landownership disputes at present. One Incorporated Land Groups has been formed and one application is underway.</li> <li>• <b>Community-based mentors:</b> There are 2 KTA funded CBMs based in Vesulogo (1 male and 1 female). Communication with the KTA office is via VHF radio or mobile. The study team met up with the female CBM (and village councillor). The current Livelihoods Project has not worked with Vesulogo village.</li> <li>• <b>Local Government:</b> The Vesulogo Ward Councillor is based in the village, which makes communication with village residents easy. She took part in the study.</li> <li>• <b>Church denominations:</b> A few SDA practices are different to those of the other village denominations (e.g. the Sabbath).</li> </ul>	

**Table 4:** The present situation at Vesulogo village (continued).

<u>Livelihood Strategies</u>
<p><b>Current strategies:</b> Households are generally able to meet their priority needs through:</p> <ul style="list-style-type: none"> <li>• Subsistence activities (e.g. gardening, hunting, collecting firewood for cooking, and timber and bush materials for shelter);</li> <li>• Market sales in Owers’ Corner, Sogeri and Port Moresby (mostly fruit and vegetables);</li> <li>• Cash cropping (rubber and ginger);</li> <li>• Part-time tourism related activities, mostly portering and market sales since tourists start trekking at Owers’ Corner where the road ends;</li> <li>• Local businesses, local employment and town employment.</li> </ul>
<p><b>Proposed strategies:</b> Meeting participants recommended KTA assist with:</p> <ul style="list-style-type: none"> <li>• Agricultural projects for home consumption and income generation (e.g. vegetables and poultry);</li> <li>• Women’s income generation activities (e.g. cooking, baking, sewing, screen printing) for trekkers, porters, church rallies, women’s group gatherings etc. Owers’ Corner provides a good location for selling products to trekkers, tour guides and porters since many treks finish here.</li> </ul>

### 3.1.2. Oro Province

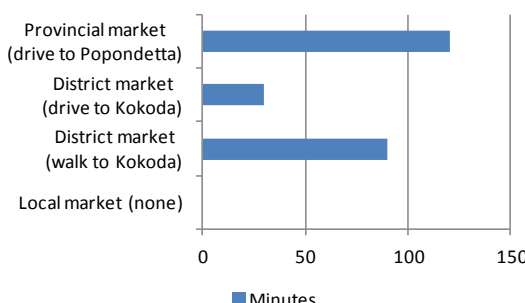

Table 5 presents our baseline findings from the sample village along the edge of the Mambare valley.

**Table 5:** The present situation at Kovelov village.

2. KOVELO VILLAGE KOKODA LLG; WARD 2
<u>Livelihood Assets</u>
<p><b>Financial resources:</b> Village residents source most of their income from:</p> <ul style="list-style-type: none"> <li>• Cash crops (rubber, cocoa and oil palm);</li> <li>• District and provincial market sales (mostly fresh fruit and vegetables);</li> <li>• Tourism related activities (mostly portering since trekkers usually walk on to Kokoda, as well as track maintenance payments &amp; ward development grants from KTA);</li> <li>• There are 4 trade stores.</li> </ul>
<p><b>Natural resources:</b> Kovelov is located around 600m. above sea level. The land around Kovelov comprises:</p> <ul style="list-style-type: none"> <li>• Primary forest;</li> <li>• Secondary forest (for shifting cultivation);</li> <li>• Areas of rubber, cocoa and oil palm (on state land leased by local landowners)</li> <li>• Area allocated for coffee project.</li> </ul> <p>There are some ongoing landownership disputes.</p>
<p><b>Physical resources:</b> Kovelov village residents have access to:</p> <ul style="list-style-type: none"> <li>• Unsealed road from Kokoda Station up to Kovelov (around 4.5km) suitable for tractor or 4 WD;</li> <li>• Unsealed road from Kokoda Station to Popondetta (condition varies);</li> <li>• Third level airstrip at Kokoda which caters for flights to Popondetta and Port Moresby;</li> <li>• Elementary school at Kovelov in good condition;</li> <li>• Lower and upper primary school at Kokoda Station (up to 1.5 hour walk or short drive);</li> <li>• Secondary school at Kokoda Station;</li> <li>• District health centre at Kokoda Station (up to 1 hour walk or short drive);</li> </ul>



**Table 5:** The present situation at Kovelovillage (continued).

<b>Livelihood Assets (continued)</b>											
<ul style="list-style-type: none"> <li>• Village VHF radio for communication with KTA, as well as reliable mobile network;</li> <li>• Medevac site;</li> <li>• Clean, piped water from a gravity fed system.</li> </ul> <p>Each household is responsible for securing its own power supply.</p>											
 <table border="1"> <caption>Data for Figure 20: Access to markets and services</caption> <thead> <tr> <th>Market Type</th> <th>Travel Time (Minutes)</th> </tr> </thead> <tbody> <tr> <td>Provincial market (drive to Popondetta)</td> <td>~120</td> </tr> <tr> <td>District market (drive to Kokoda)</td> <td>~30</td> </tr> <tr> <td>District market (walk to Kokoda)</td> <td>~90</td> </tr> <tr> <td>Local market (none)</td> <td>0</td> </tr> </tbody> </table> <p><b>Figure 20:</b> Access to markets and services</p>	Market Type	Travel Time (Minutes)	Provincial market (drive to Popondetta)	~120	District market (drive to Kokoda)	~30	District market (walk to Kokoda)	~90	Local market (none)	0	 <p><b>Figure 21:</b> Kovelovillage elementary school</p>
Market Type	Travel Time (Minutes)										
Provincial market (drive to Popondetta)	~120										
District market (drive to Kokoda)	~30										
District market (walk to Kokoda)	~90										
Local market (none)	0										
<b>Structures and Processes</b>											
<p><b>External structures and processes:</b> The residents of Kovelovillage interact with some external agencies:</p> <ul style="list-style-type: none"> <li>• <u>Department of Primary Industry:</u> Assist with the production of rubber and cocoa.</li> <li>• <u>Kokoda Track Authority:</u> There is 1 Ranger at Kovelovillage who communicates with the KTA office via VHF radio and mobile. The KTA track maintenance program and ward development grants provide a reliable source of income each year. The Livelihoods / Micro-business Support Project has provided 2 basic business/financial management trainings for CBMs. The current Livelihoods Project has worked with some Kovelovillage residents through their CBM (refer Section 4.3, page 47). However, people have limited understanding about Livelihoods Project Plan (no documents have been seen).</li> <li>• <u>National government:</u> The member for Sohe District is based in Popondetta and Port Moresby.</li> <li>• <u>Sub-national government:</u> The Kokoda LLG office District headquarters are based in Kokoda Station. The Oro Province Administration is based in Popondetta.</li> </ul>											
<p><b>Internal structures and processes:</b> The residents of Kovelovillage also interact with some important internal structures and decision-making processes:</p> <ul style="list-style-type: none"> <li>• <u>Clan Groups:</u> There are some ongoing landownership disputes. The areas of rubber, cocoa and oil palm are on state land that is leased by local landowners.</li> <li>• <u>Community-based mentors:</u> There is 1 KTA funded CBM (male) based in Kovelovillage who met with the study team. Communication with the KTA office is via VHF radio and mobile.</li> <li>• <u>Local Government:</u> The Kovelovillage Ward Councillor is based in Kokoda which makes communication with village residents easy. The study team met with the Ward Councillor in Kokoda. The councillor suggested the Kokoda LLGs pump in at least K50, 000 each per annum to help KTA with their work along the track.</li> </ul>											

**Table 5:** The present situation at Kovelovillage (continued).

<u>Livelihood Strategies</u>
<p><b>Current strategies:</b> Kovelovillage residents are generally able to meet their priority needs through:</p> <ul style="list-style-type: none"> <li>• Subsistence activities (e.g. gardening, fishing / hunting, collecting firewood for cooking, and timber and bush materials for shelter);</li> <li>• Market sales in Kokoda and Popondetta (mostly fruit and vegetables);</li> <li>• Part-time tourism related activities (there are 4 campsites; however most trekkers walk through Kovelovillage and on to Kokoda);</li> <li>• Rubber, cocoa and oil palm are planted in blocks leased from the state by family groups. 34 hectares of land has recently been earmarked for a coffee plantation. Access to markets in Popondetta is a constraint (including coffee).</li> </ul>
<p><b>Proposed strategies:</b> Survey participants proposed the following livelihoods strategies:</p> <ul style="list-style-type: none"> <li>• Village community needs to actively participate and take ownership in tourism related activities.</li> <li>• Establish community resource centre to provide funding support, together with awareness, training, resources, and follow up visits from KTA and other relevant authorities.</li> <li>• Upgrade the guesthouse/campsite facility.</li> <li>• Strengthen existing agricultural capacity (e.g. gardening, cocoa, rubber, and oil palm) particularly with regards to market and product development (e.g. supply mills for proposed coffee project).</li> <li>• Establish cattle, poultry, and piggery projects (with fencing and materials to be provided from start).</li> <li>• Establish supermarket so village residents don't have to walk to buy store goods.</li> <li>• The men's group suggested the community (i.e. KTA, LLG, Provincial government) work together. Village people must be consulted about which project they can manage and sustain. Larger projects that cannot be managed should not be started. Development partners should not come and go-way for good. Funding, training and follow-up support is needed.</li> <li>• The women's group suggested income generation projects should start small and involve women. Other projects should come later (e.g. cattle, supermarket and resource centre).</li> </ul>

### 3.2. Sites with Airport Access only (Area 2)

Within the track area, there are around 9 villages in Central Province (no villages in Oro Province) which lie within 1 hour walking distance from an airport (and have no road access). These sites have intermittent and costly connections to district and/or provincial markets and services, as well as low land potential due to environmental constraints such as poor soils, long dry season and steep slopes.

Section 3.2.1 presents our baseline findings from the 5 sample villages / village groups in Area 2.

#### 3.2.1. Central Province

Table 6 presents our baseline findings from the 5 sample villages / village groups along the inland ranges of Central Province.

**Table 6:** The present situation at Kagi village.

1. KAGI VILLAGE	
KOIARI LLG; WARD 16 (Kagi and Naduri village)	
<u>Livelihood Assets</u>	
<p><b>Financial resources:</b> Kagi village residents source:</p> <ul style="list-style-type: none"> <li>• Most of their income from part-time tourism related activities, including: portering, guest house / campsite accommodation and meals, food stalls, as well as track maintenance payments &amp; ward development grants (from KTA);</li> <li>• Some of their income from market sales, namely: village products (e.g. vegetables and baskets) to Port Moresby residents, and Port Moresby products (e.g. soap and rice) to village residents;</li> <li>• Some funds for one-off activities (e.g. bride price and village projects) from relatives in Port Moresby.</li> </ul> <p>Village residents have poor access to formal credit (e.g. banking or micro-finance institutions) and informal credit (e.g. savings clubs or money lenders).</p>	
<p><b>Figure 22:</b> Main sources of village income</p>	<p><b>Figure 23:</b> Village resident access to credit</p>
<u>Livelihood Assets</u>	
<p><b>Human resources:</b> Kagi village was established around 60 years ago. The current village population is around 170 (36 households) with an additional 130 people living in Port Moresby. Over the last 10 years, out-migration has been greater than in-migration (-4).</p> <p>Education levels within the village are low with only 12 secondary qualifications. Work experience is restricted to the tourism sector. There are 5 guesthouses successfully participating in the KTA certification programme (1 pending corrective actions) which provide part-time work for around 50 women (e.g. baking, cooking, laundry, catering). However, most tourists now travel through Naduri which has reduced village-based opportunities. Eight males have portering and first aid qualifications.</p> <p>Overall, male and female qualifications and work experience levels are quite similar.</p>	

**Table 6:** The present situation at Kagi village (continued).

<b>Livelihood Assets (continued)</b>	
<p><b>Figure 24:</b> Village resident age groups</p>	<p><b>Figure 25:</b> Village residents and Port Moresby residents</p>
<p><b>Figure 26:</b> Village resident qualifications</p>	<p><b>Figure 27:</b> Village resident work experience</p>
<p><b>Natural resources:</b> Kagi is located around 1,400m. above sea level. Village residents comprise 4 clan groups. Their land is held under customary title, and contains large areas of primary and secondary forest (for shifting cultivation) to the west and north-west of the track, as well as smaller area to the east which includes the Templeton’s 1 and 2 sections of the track.</p>	
<p><b>Figure 28:</b> Land cover</p>	<p><b>Figure 29:</b> Land ownership</p>
<p><b>Physical resources:</b> Kagi village residents have access to:</p> <ul style="list-style-type: none"> <li>• Third level airstrip which provides scheduled flights (around 3 flights per week) and charter flights to Port Moresby. Scheduled airfares are currently 250 kina per person and 2.50 kina per kilogram;</li> <li>• Elementary school and aid post at Kagi (both in good condition);</li> <li>• Lower and upper primary school (good condition) at Kavovo (1 hour walk). Teachers not always there due to inadequate housing;</li> <li>• Secondary boarding school at Sogeri and others in Port Moresby;</li> <li>• Village VHF radios for communication with KTA and the DoH, but no mobile network (landowners have not accepted Digicel’s offer to establish a network along the track, since some leaders are concerned about the negative effects of increased social networks on their community);</li> <li>• Clean, piped water from a gravity fed system.</li> </ul> <p>Each household is responsible for securing its own power supply. There are 2 households with solar power.</p>	

**Table 6:** The present situation at Kagi village (continued).

<b>Livelihood Assets (continued)</b>	
<p><b>Figure 30:</b> Access to markets and services</p>	<p><b>Figure 31:</b> Access to reliable power supply</p>
<b>Structures and Processes</b>	
<p><b>External structures and processes:</b> The residents of Kagi interact with a variety of external agencies:</p> <ul style="list-style-type: none"> <li> <p><b>AusAID:</b> The Strongim Pipol Strongim Nesen Program has supported the establishment of the Mount Koiari Women’s Group. Through this initiative, the Kagi Women’s Group has received some funding to establish local businesses (not successful due to limited follow-up support). AusAID has also provided volunteer assistance in the areas of health, education, and law &amp; order.</p> </li> <li> <p><b>Department of Environment &amp; Conservation:</b> There appears to be minimal understanding about Goal 3 of the KI Design Document, namely: <i>the wise use and conservation of the catchment protection area, including the Kokoda Track and its natural and cultural resources and values</i>. Although there is a view that the track benefits trekkers more than landowners. Ward development committee members understood that DEC had arranged for a feasibility study to investigate the proposed Brown River catchment electricity / water supply project.</p> </li> <li> <p><b>Kokoda Development Program:</b> KDP has recently constructed an elementary school classroom for Kagi and is currently paying the elementary teacher until this position has been absorbed by the government’s Department of Personnel Management (KTF funded the teacher training). <b>Kokoda Track Authority:</b> The nearest KTA ranger is based in Efogi (2 hour walk) who communicates with the KTA office via VHF radio. The ranger was not present during the study. The KTA track maintenance program and ward development grants provide a reliable source of income each year. The Livelihoods/Micro-business Support Project has provided 2 basic business/financial management trainings for CBMs. The current Livelihoods Project has worked with some Kagi village residents through their 2CBMs (refer Section 4.3, page 47). However, people have limited understanding about Livelihoods Project Plan (no documents seen).</p> </li> <li> <p><b>Kokoda Track Foundation:</b> KTF has funded the training of the Kagi elementary school teacher, and provided school stationeries and school fee subsidies for top students. KTF has also arranged for 10 women to attend a training course on village baking for tourists at Efogi 2 (ingredients hard to access locally).</p> </li> <li> <p><b>National government:</b> The member for Kairuku-Hiri District is based in Port Moresby.</p> </li> <li> <p><b>Sub-national government:</b> The Koiari LLG office, Kairuku-Hiri District headquarters, and the Central Province Administration are all based in Port Moresby. Overall, village residents have limited access to the District Service Improvement Program. Government regulations that restrict landowner ability to use their resources are also minimal.</p> </li> <li> <p><b>PNG Law and Justice Sector:</b> Village law and justice officers have attended a training course arranged by the PNG LJS at Kagi.</p> </li> <li> <p><b>Rotary International:</b> The aid post at Kagi was constructed by the Rotary Club of Australia.</p> </li> <li> <p><b>Seventh Day Adventist Church:</b> The SDA Church has widespread, ongoing and day-to-day influence. This institution is both well-organized and well-respected at all levels with its district office in Efogi 2, national office in Port Moresby, regional office in Australia and global headquarters in USA.</p> </li> <li> <p><b>Third Level Airlines:</b> Overall, people expressed a need for more frequent and cheaper (e.g. subsidized) air services to Port Moresby to facilitate access to essential services.</p> </li> </ul>	

**Table 6:** The present situation at Kagi village (continued).

<b>Structures and Processes</b> (continued)
<ul style="list-style-type: none"> <li>• <b>Tour Companies:</b> Overall, collaboration with tour companies was seen to be meeting the needs of the trekkers; working mostly through KTA’s VHF radio network. One operator has provided solar power for lighting and elementary school stationeries. However, tour guide and porter fees have not kept pace with inflation and KTA conditions for local staff are not always followed, particularly: (i) loads less than 22.5 kg, and (ii) return flight (or equivalent in cash) at end of each trek.</li> </ul>
<p><b>Internal structures and processes:</b> The residents of Kagi also interact with some important internal structures and decision-making processes:</p> <ul style="list-style-type: none"> <li>• <b>Clan Groups:</b> Landownership issues are dealt with by the leaders of the 4 patrilineal clan groups. There are no significant landownership disputes at present, and it has not been necessary for any clan to form an Incorporated Land Groups.</li> <li>• <b>Community-based mentors:</b> There are 2 KTA funded CBMs based in Kagi (both male). Communication with the KTA office is via VHF radio. The study team did not meet the Kagi CBMs, and their performance to-date was described as being ineffective due to limited commitment, as well as limited support from KTA.</li> <li>• <b>Local Government:</b> The Kagi Ward Councillor is based in Port Moresby, which makes communication with village residents difficult and communication with external agencies (e.g. KTA and LLG officers) easier. The study team did not meet the ward development committee representatives (although the councillor was invited to take part in the study).</li> <li>• <b>SDA Church Board:</b> The SDA church pastor and board members are based in Kagi; providing overall guidance on the village congregation’s social, physical, mental and spiritual development.</li> </ul>
<b>Livelihood Strategies</b>
<p><b>Current strategies:</b> Kagi residents are well focused on feeding, housing and educating their family, as well as contributing to their various clan and village obligations. Households are generally able to meet their priority needs through:</p> <ul style="list-style-type: none"> <li>• Subsistence activities (e.g. gardening, fishing / hunting as per SDA guidelines, collecting firewood for cooking, and timber and bush materials for shelter);</li> <li>• Market sales in Port Moresby and Kagi (village porters often bring back goods from Port Moresby for sale in the village, and relatives in Port Moresby often assist with sale of baskets, bilums etc);</li> <li>• Part-time tourism related activities (there are 5 guesthouses successfully participating in the KTA certification programme (1 pending corrective actions). However, most tourists now travel through Naduri which has reduced village-based opportunities;</li> <li>• Remittances from relatives for one-off activities.</li> </ul> <p>Previous income generation strategies are visible, namely:</p> <ul style="list-style-type: none"> <li>• Old mandarin orchards around houses are neglected due to low yields and high transport costs. These trees used to provide a valuable, seasonal household income;</li> <li>• Coffee plantings are also neglected due to high transport costs (nearest market is Lea). The Koiari Development Authority previously established a coffee mill at 17 Mile which provided a welcome market (now run down). Also, the SDA church does not encourage the habit of drinking coffee.</li> </ul>
<p><b>Proposed strategies:</b> Meeting participants recommended the KTA Livelihoods Project assist the Kagi community to develop a Livelihoods Plan with village leaders that:</p> <ul style="list-style-type: none"> <li>• Supports income generation activities (e.g. training in business start-up and management, guest house management, tourism and hospitality, cultural centre for tourists);</li> <li>• Assists with production of local protein for households and tourists (e.g. poultry);</li> <li>• Assists with development of appropriate techniques that strengthen food security, and increase crop yields for households, tourists and Port Moresby markets;</li> <li>• Secures funding support from the District Services Improvement Program;</li> <li>• Ensures CBMs work for the community; rather than themselves;</li> <li>• Achieves concrete results; rather than raises expectations that cannot be delivered.</li> </ul>



**Table 7:** The present situation at Boridi, Davoi, Manumu, Maraba and Milei villages.

<b>2. BORIDI, DAVOI, MANUMU, MARABA AND MILEI VILLAGES</b> KOIARI LLG; WARD 15	
<u>Livelihood Assets</u>	
<p><b>Financial resources:</b> Boridi, Davoi, Manumu, Maraba and Milei village residents source:</p> <ul style="list-style-type: none"> <li>• Most of their income from part-time tourism related activities, mostly: portering and ward development grants (from KTA) since the villages are some distance from the track;</li> <li>• Market sales, namely: village products (e.g. vegetables, baskets, seasonal okari nuts) to Port Moresby residents, and Port Moresby products (e.g. soap and rice) to village residents;</li> <li>• Some funds for one-off activities (e.g. bride price and village projects) from relatives in Port Moresby.</li> </ul> <p>Village residents have poor access to formal credit (e.g. banking or micro-finance institutions) and informal credit (e.g. savings clubs or money lenders).</p>	
<p><b>Figure 32:</b> Main sources of village income</p>	<p><b>Figure 33:</b> Village resident access to credit</p>
<p><b>Human resources:</b> Manumu village was established during the colonial era, and the other villages followed later. The total village population is around 500 (68 households) with an additional 1,000 people living in Port Moresby. Over the last 10 years, out-migration has been significantly greater than in-migration (-55). Education levels within the 5 villages are moderate with 23 secondary and 15 tertiary qualifications. Work experience is restricted to the tourism sector. There are no guesthouse owners participating in the KTA certification programme, but one local tour company has been established.</p> <p>Overall, male qualifications and work experience levels are greater than their female counterparts.</p>	
<p><b>Figure 34:</b> Village resident age groups</p>	<p><b>Figure 35:</b> Village residents and Port Moresby residents</p>

**Table 7:** The present situation at Boridi, Davoi, Manumu, Maraba and Milei villages (continued).

<b>Livelihood Assets (continued)</b>																															
<table border="1"> <caption>Data for Figure 36: Village resident qualifications</caption> <thead> <tr> <th>Qualification</th> <th>Women</th> <th>Men</th> </tr> </thead> <tbody> <tr> <td>Agriculture qualification</td> <td>0</td> <td>0</td> </tr> <tr> <td>Forestry qualification</td> <td>0</td> <td>0</td> </tr> <tr> <td>Tourism qualification</td> <td>0</td> <td>9</td> </tr> <tr> <td>Tertiary qualification</td> <td>5</td> <td>10</td> </tr> <tr> <td>Secondary qualification</td> <td>9</td> <td>14</td> </tr> </tbody> </table> <p style="text-align: center;"><b>Figure 36:</b> Village resident qualifications</p>	Qualification	Women	Men	Agriculture qualification	0	0	Forestry qualification	0	0	Tourism qualification	0	9	Tertiary qualification	5	10	Secondary qualification	9	14	<table border="1"> <caption>Data for Figure 37: Village resident work experience</caption> <thead> <tr> <th>Experience</th> <th>Women</th> <th>Men</th> </tr> </thead> <tbody> <tr> <td>Agro industry experience</td> <td>0</td> <td>0</td> </tr> <tr> <td>Forest industry experience</td> <td>0</td> <td>0</td> </tr> <tr> <td>Tourism industry experience</td> <td>5</td> <td>120</td> </tr> </tbody> </table> <p style="text-align: center;"><b>Figure 37:</b> Village resident work experience</p>	Experience	Women	Men	Agro industry experience	0	0	Forest industry experience	0	0	Tourism industry experience	5	120
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<p><b>Natural resources:</b> The 5 villages are located from around 600 to 1,400m. above sea level. The residents of the 5 villages comprise 8 clan groups. Their land is held under customary title, and contains large areas of primary and secondary forest (for shifting cultivation).</p>																															
<table border="1"> <caption>Data for Figure 38: Land cover</caption> <thead> <tr> <th>Land Cover Type</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Primary forest</td> <td>~65%</td> </tr> <tr> <td>Secondary forest</td> <td>~25%</td> </tr> <tr> <td>Grassland</td> <td>~5%</td> </tr> <tr> <td>Swamp</td> <td>~5%</td> </tr> </tbody> </table> <p style="text-align: center;"><b>Figure 38:</b> Land cover</p>	Land Cover Type	Percentage	Primary forest	~65%	Secondary forest	~25%	Grassland	~5%	Swamp	~5%	<table border="1"> <caption>Data for Figure 39: Land ownership</caption> <thead> <tr> <th>Ownership Type</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Customary title</td> <td>~95%</td> </tr> <tr> <td>State title</td> <td>~3%</td> </tr> <tr> <td>Freehold title</td> <td>~2%</td> </tr> </tbody> </table> <p style="text-align: center;"><b>Figure 39:</b> Land ownership</p>	Ownership Type	Percentage	Customary title	~95%	State title	~3%	Freehold title	~2%												
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<p><b>Physical resources:</b> Boridi, Davoi, Manumu, Maraba and Milei village residents have access to:</p> <ul style="list-style-type: none"> <li>• Third level airstrips at Milei, Davoi and Kagi, with scheduled flights (around 3 flights per week) from Milei and Kagi to Port Moresby. Scheduled airfares are currently 250 kina per person and 2.50 kina per kilogram;</li> <li>• Elementary schools at Davoi and Maraba (poor condition) and Kagi (good condition);</li> <li>• Lower and upper primary school (good condition) at Kavovo (1 hour + walk). The school is in good condition, but teachers not always there due to inadequate housing;</li> <li>• Aid post at Boridi (poor condition) and Kagi (good condition);</li> <li>• Secondary boarding school at Sogeri and others in Port Moresby;</li> <li>• Village VHF radio for communication with KTA at Milei and Davoi, but no mobile network (landowners have not accepted Digicel's offer to establish a network along the track, since some leaders are concerned about the negative effects of increased social networks on their community);</li> <li>• Gravity fed water supply systems at Davoi, Milei and Maraba.</li> </ul> <p>Each household is responsible for securing its power supply. Currently no households have power.</p>																															
<table border="1"> <caption>Data for Figure 40: Access to markets and services</caption> <thead> <tr> <th>Market Type</th> <th>Average Hours</th> </tr> </thead> <tbody> <tr> <td>Provincial market (fly to Port Moresby)</td> <td>~2</td> </tr> <tr> <td>Provincial market (walk to Sogeri; bus to Port Moresby)</td> <td>~28</td> </tr> <tr> <td>District market (walk to Sogeri)</td> <td>~25</td> </tr> <tr> <td>Local market (none)</td> <td>0</td> </tr> </tbody> </table> <p style="text-align: center;"><b>Figure 40:</b> Access to markets and services</p>	Market Type	Average Hours	Provincial market (fly to Port Moresby)	~2	Provincial market (walk to Sogeri; bus to Port Moresby)	~28	District market (walk to Sogeri)	~25	Local market (none)	0	<table border="1"> <caption>Data for Figure 41: Access to reliable power supply</caption> <thead> <tr> <th>Power Access Status</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td> PNG Power</td> <td>~98%</td> </tr> <tr> <td> Own generator</td> <td>~0%</td> </tr> <tr> <td> Own solar</td> <td>~0%</td> </tr> <tr> <td> No reliable access to power</td> <td>~2%</td> </tr> </tbody> </table> <p style="text-align: center;"><b>Figure 41:</b> Access to reliable power supply</p>	Power Access Status	Percentage	PNG Power	~98%	Own generator	~0%	Own solar	~0%	No reliable access to power	~2%										
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**Table 7:** The present situation at Boridi, Davoi, Manumu, Maraba and Milei villages (continued).

<b><u>Structures and Processes</u></b>
<p><b>External structures and processes:</b> The residents of Boridi, Davoi, Manumu, Maraba and Milei villages interact with a variety of external agencies, including:</p> <ul style="list-style-type: none"> <li>• <b>Tourism Promotion Authority:</b> The TPA has given tour guide training and completion certificates to 9 village youths.</li> <li>• <b>Department of Environment &amp; Conservation:</b> There appears to be minimal understanding about Goal 3 of the KI Design Document, namely: <i>the wise use and conservation of the catchment protection area, including the Kokoda Track and its natural and cultural resources and values</i>. Although there is a view that the track benefits trekkers more than landowners.</li> <li>• <b>Kokoda Development Program:</b> The KDP has provided HIV/AIDS training and awareness. <b>Kokoda Track Authority:</b> The nearest KTA ranger is based in Efogi (3 hour+ walk) who communicates with the KTA office via VHF radio. The ranger was not present during the study. The KTA ward development grants provide an additional source of income. The Livelihoods / Micro-business Support Project has provided 2 basic business/financial management trainings for CBMs. The current Livelihoods Project has not worked with the 5 villages. People have limited understanding about Livelihoods Project Plan (no documents have been seen).</li> <li>• <b>National government:</b> The member for Kairuku-Hiri District is based in Port Moresby.</li> <li>• <b>Sub-national government:</b> The Koiari LLG office, Kairuku-Hiri District headquarters, and the Central Province Administration are all based in Port Moresby. Overall, village residents have limited access to the District Service Improvement Program. Government regulations that restrict landowner ability to use their resources are also minimal.</li> <li>• <b>Seventh Day Adventist Church:</b> The SDA Church has widespread, ongoing and day-to-day influence. This institution is both well-organized and well-respected at all levels with its district office in Efogi 1, national office in Port Moresby, regional office in Australia and global headquarters in USA.</li> <li>• <b>Third Level Airlines:</b> Overall, people expressed a need for more frequent and cheaper (e.g. subsidized) air services to Port Moresby to facilitate access to essential services.</li> <li>• <b>Tour Companies:</b> Overall, collaboration with tour companies was seen to be meeting the needs of the trekkers; working mostly through KTA's VHF radio network. However, tour guide and porter fees have not kept pace with inflation, and KTA conditions for local staff are not always followed, particularly: (i) loads less than 22.5 kg, and (ii) return flight (or equivalent in cash) at end of each trek.</li> </ul>
<p><b>Internal structures and processes:</b> The residents of Boridi, Davoi, Manumu, Maraba and Milei villages also interact with some important internal structures and decision-making processes:</p> <ul style="list-style-type: none"> <li>• <b>Clan Groups:</b> Landownership issues are dealt with by the leaders of the 8 patrilineal clan groups. There are currently 5 landownership disputes at present between clans. It has not been necessary for any clan to form an Incorporated Land Groups formed.</li> <li>• <b>Community-based mentors:</b> There is 1 male KTA funded CBM (the Ward Councillor) based in Davoi. Communication with the KTA office is via VHF radio. The CBM advised he had attended 2 business management training courses arranged by KTA in 2011 (at Efogi and Port Moresby). He has since provided one 2-day training session for 5 members of Davoi village, and one trainee is now successfully selling products from Port Moresby (e.g. noodles). Overall, his outputs to date have been minimal due to limited support from KTA and no work plan to follow.</li> <li>• <b>Local Government:</b> The Ward Councillor (also CBM) is based in Davoi. He walked down to Kagi with ward development committee representatives to meet with the study team. His unusual decision to be based in the village (rather than Port Moresby) was clearly popular with village representatives.</li> <li>• <b>SDA Church Board:</b> The SDA church pastor and board members are based in Kagi; providing overall guidance on the village congregation's social, physical, mental and spiritual development.</li> </ul>

**Table 7:** The present situation at Boridi, Davoi, Manumu, Maraba and Milei villages (continued).

<u>Livelihood Strategies</u>
<p><b>Current strategies:</b> The residents of Boridi, Davoi, Manumu, Maraba and Milei villages are well focused on feeding, housing and educating their family, as well as contributing to their various clan and village obligations. Households are generally able to meet their priority needs through:</p> <ul style="list-style-type: none"> <li>• Subsistence activities (e.g. gardening, fishing / hunting as per SDA guidelines, collecting firewood for cooking, and timber and bush materials for shelter);</li> <li>• Market sales in Port Moresby and village (village porters often bring back goods from Port Moresby for sale in the village, and relatives in Port Moresby often assist with sale of garden food, seasonal okari nuts, bilums, baskets etc);</li> <li>• Part-time tourism related activities, mostly portering since the 5 villages range from 2 to 10kms from Kagi which restricts village-based activities. There are no guesthouses participating in the KTA certification programme;</li> <li>• Remittances from relatives for one-off activities.</li> </ul>
<p><b>Proposed strategies:</b> The ward development committee representatives recommended the KTA Livelihoods Project:</p> <ul style="list-style-type: none"> <li>• Support income generation activities (e.g. provide the community-based mentor with train-the-trainer support; increase guest house fees to keep pace with inflation; identify suitable cash crops; subsidize freight costs; establish business arm in Port Moresby that invests ward development funds for the future (e.g. property, hotel));</li> <li>• Assists with protein production for households and tourists (e.g. livestock);</li> <li>• Communicate with ward development committee and community representatives to ensure all are on the same page;</li> <li>• Link up with LLG plans to secure funding support from District Services Improvement Program;</li> <li>• Ensures CBMs receive adequate training, and follow-up training;</li> <li>• Ensure tour operators do not work on the Sabbath.</li> </ul>

**Table 8:** The present situation at Naduri village.

3. NADURI VILLAGE KOIARI LLG; WARD 16 (Kagi and Naduri village)	
<u>Livelihood Assets</u>	
<p><b>Financial resources:</b> Naduri village residents source:</p> <ul style="list-style-type: none"> <li>• Most of their income from part-time tourism related activities, including: portering, guest house accommodation and meals, track maintenance and ward development grants (from KTA);</li> <li>• Some income comes from market sales, namely: village products (e.g. vegetables and baskets) to Port Moresby residents and Port Moresby products (e.g. soap and rice) to village residents;</li> <li>• Some funds for one-off activities (e.g. bride price and village projects) from relatives in Port Moresby. This includes one vehicle workshop with hire cars.</li> </ul> <p>Village residents have poor access to formal credit (e.g. banking or micro-finance institutions) and informal credit (e.g. savings clubs or money lenders).</p>	
<p><b>Figure 42:</b> Main sources of village income</p>	<p><b>Figure 43:</b> Village resident access to credit</p>

**Table 8:** The present situation at Naduri village (continued).

<b>Livelihood Assets</b>	
<p><b>Human resources:</b> Naduri village was established around 50 years ago. The total village population is around 250 (36 households) with an additional 230 people living in Port Moresby. Over the last 10 years, out-migration has been significantly greater than in-migration (-20).</p> <p>Education levels within Naduri are low with 10 secondary qualifications. Work experience is restricted to the tourism sector. There is 1 community owned guesthouses / campsite participating successfully in the certification programme. This operation provides part-time work for around 7 men and 5 women in the village. There is one local tour company based in Port Moresby.</p> <p>Overall, male qualifications and work experience levels are greater than their female counterparts.</p>	
<p><b>Figure 44:</b> Village resident age groups</p>	<p><b>Figure 45:</b> Village residents and Port Moresby residents</p>
<p><b>Figure 46:</b> Village resident qualifications</p>	<p><b>Figure 47:</b> Village resident work experience</p>
<p><b>Natural resources:</b> Naduri is located around 1,400m. above sea level. Village residents comprise 3 clan groups. Their land is held under customary title, and contains primary forest, secondary forest and some grassland.</p>	
<p><b>Figure 48:</b> Land cover</p>	<p><b>Figure 49:</b> Land ownership</p>
<p><b>Physical resources:</b> Naduri village residents have access to:</p> <ul style="list-style-type: none"> <li>• Third level airstrip which provides charter flights to Port Moresby;</li> <li>• Elementary school at Naduri (good condition);</li> <li>• Community health post at Naduri (good condition);</li> <li>• Lower and upper primary school at Kavovo (0.5 hour + walk). The school is in good condition, but teachers are not always there due to inadequate housing;</li> <li>• Secondary boarding school at Sogeri and others in Port Moresby;</li> </ul>	

**Table 8:** The present situation at Naduri village (continued).

<b>Livelihood Assets</b> (continued)																					
<ul style="list-style-type: none"> <li>Village VHF radio for communication with KTA and DoH, but no mobile network (landowners have not accepted Digicel’s offer to establish a network along the track, since some leaders are concerned about the negative effects of increased social networks on their community);</li> <li>Clean, piped water from a gravity fed system.</li> </ul> <p>Each household is responsible for securing their power supply. Four households have solar power for lighting.</p>																					
<table border="1"> <caption>Data for Figure 50: Access to markets and services</caption> <thead> <tr> <th>Market Type</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>Provincial market (fly to Port Moresby)</td> <td>1</td> </tr> <tr> <td>Provincial market (walk to Sogeri; bus to Port Moresby)</td> <td>25</td> </tr> <tr> <td>District market (walk to Sogeri)</td> <td>22</td> </tr> <tr> <td>Local market (none)</td> <td>0</td> </tr> </tbody> </table> <p><b>Figure 50:</b> Access to markets and services</p>	Market Type	Hours	Provincial market (fly to Port Moresby)	1	Provincial market (walk to Sogeri; bus to Port Moresby)	25	District market (walk to Sogeri)	22	Local market (none)	0	<table border="1"> <caption>Data for Figure 51: Access to reliable power supply</caption> <thead> <tr> <th>Power Source</th> <th>Percentage (approx.)</th> </tr> </thead> <tbody> <tr> <td>PNG Power</td> <td>5%</td> </tr> <tr> <td>Own generator</td> <td>5%</td> </tr> <tr> <td>Own solar (for basic lighting)</td> <td>10%</td> </tr> <tr> <td>No reliable access to power</td> <td>80%</td> </tr> </tbody> </table> <p><b>Figure 51:</b> Access to reliable power supply</p>	Power Source	Percentage (approx.)	PNG Power	5%	Own generator	5%	Own solar (for basic lighting)	10%	No reliable access to power	80%
Market Type	Hours																				
Provincial market (fly to Port Moresby)	1																				
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<b>Structures and Processes</b>																					
<p><b>External structures and processes:</b> The residents of Naduri village interact with a variety of external agencies, including:</p> <ul style="list-style-type: none"> <li><b>Department of Environment &amp; Conservation:</b> There appears to be minimal understanding about Goal 3 of the KI Design Document, namely: <i>the wise use and conservation of the catchment protection area, including the Kokoda Track and its natural and cultural resources and values</i>. Although there is a view that the track benefits trekkers more than landowners.</li> <li><b>Kokoda Development Program:</b> The KDP has constructed a community health post at Naduri (KTF funded the training of the government health worker).</li> <li><b>Kokoda Track Authority:</b> The nearest KTA ranger is based in Efogi (2 hour+ walk) who communicates with the KTA office via VHF radio. The KTA track maintenance program and ward development grants provide an additional source of income. KTA has also provided a generator and PA system. The Livelihoods/Micro-business Support Project has provided 2 basic business/financial management trainings for CBMs. The current Livelihoods Project has worked with some Naduri village residents through their 2 CBMs (refer Section 4.3, page 47). However, people have limited understanding about Livelihoods Project Plan (no documents seen).</li> <li><b>Kokoda Track Foundation:</b> KTF funded the training of a government health worker for the community health post. They have also provided all households with small solar panels for lighting, and a women’s training course on village baking for tourists at Efogi 2.</li> <li><b>National government:</b> The member for Kairuku-Hiri District is based in Port Moresby.</li> <li><b>Sub-national government:</b> The Koiari LLG office, Kairuku-Hiri District headquarters, and the Central Province Administration are all based in Port Moresby. Overall, village residents have limited access to the District Service Improvement Program. Government regulations that restrict landowner ability to use their resources are also minimal.</li> <li><b>Seventh Day Adventist Church:</b> The SDA Church has widespread, ongoing and day-to-day influence. This institution is both well-organized and well-respected at all levels with its district office in Efogi 1, national office in Port Moresby, regional office in Australia and global headquarters in USA.</li> <li><b>Third Level Airlines:</b> Overall, people expressed a need for more frequent and cheaper (e.g. subsidized) air services to Port Moresby to facilitate access to essential services.</li> <li><b>Tour Companies:</b> Overall, collaboration with tour companies was seen to be meeting the needs of the trekkers; working mostly through KTA’s VHF radio network. One operator has also provided solar power for the elementary school. However, tour guide and porter fees have not kept pace with inflation, and KTA conditions for local staff are not always followed, particularly: (i) loads less than 22.5 kg, and (ii) return flight (or equivalent in cash) at end of each trek.</li> </ul>																					



**Table 8:** The present situation at Naduri village (continued).

<b><u>Structures and Processes</u></b> (continued)
<p><b>Internal structures and processes:</b> The residents of Naduri village also interact with some important internal structures and decision-making processes:</p> <ul style="list-style-type: none"> <li>• <b><u>Clan Groups:</u></b> Landownership issues are dealt with by the leaders of the 3 patrilineal clan groups. There are currently some landownership disputes between clans. It has not been necessary for any clan to form an Incorporated Land Groups formed.</li> <li>• <b><u>Community-based mentors:</u></b> There are 2 KTA funded CBMs based in Naduri (1 male and 1 female). Communication with the KTA office is via VHF radio. The CBMs have made some use of their basic financial management training. The female CBM has helped women establish a market area for tourists (previously within one guest house). The male CBM has assisted guest house owners to better manage cash flow and savings. Overall, their combined outputs to date have been minimal due to limited support from KTA and no work plan to follow.</li> <li>• <b><u>Local Government:</u></b> The Naduri Ward Councillor is based in Port Moresby, which makes communication with village residents difficult and communication with external agencies (e.g. KTA and LLG officers) easier. The study team did not meet any ward development committee representatives (although the councillor was invited to take part in the study).</li> <li>• <b><u>SDA Church Board:</u></b> The SDA church pastor and board members are based in Kagi; providing overall guidance on the village congregation’s social, physical, mental and spiritual development.</li> </ul>
<b><u>Livelihood Strategies</u></b>
<p><b>Current strategies:</b> The residents of Naduri village are well focused on feeding, housing and educating their family, as well as contributing to their various clan and village obligations. Households are generally able to meet their priority needs through:</p> <ul style="list-style-type: none"> <li>• Subsistence activities (e.g. gardening, fishing / hunting as per SDA guidelines, collecting firewood for cooking, and timber and bush materials for shelter);</li> <li>• Market sales in Port Moresby and Naduri (village porters often bring back goods from Port Moresby for sale in the village, and relatives in Port Moresby often assist with sale of garden food, bilums, baskets etc);</li> <li>• Part-time tourism related activities (Naduri is on the main track);</li> <li>• Remittances from relatives for one-off activities;</li> </ul> <p>Previous income generation strategies are also visible, namely:</p> <ul style="list-style-type: none"> <li>• Old mandarin orchards around houses are neglected due to low yields and high transport costs. These trees used to provide a valuable, seasonal household income;</li> <li>• Coffee plantings are also neglected due to high transport costs (nearest market is Lea). The Koiari Development Authority previously established a coffee mill at 17 Mile which provided a welcome market (now run down). Also, the SDA church does not encourage the habit of drinking coffee.</li> </ul>
<p><b>Proposed strategies:</b> Meeting participants recommended the KTA Livelihoods Project develop an achievable work plan that:</p> <ul style="list-style-type: none"> <li>• Supports income generation activities (e.g. provide training and follow-up training; subsidize freight costs; provide business start-up loans (people can contribute their savings); conduct market research to identify what tourists want and what can be delivered (e.g. flowers, orchids, gifts, cakes, hot drinks); establish a centre for tourists);</li> <li>• Assists with protein production for households and tourists (e.g. poultry);</li> <li>• Ensures CBMs receive adequate training, and follow-up training to build local capacity.</li> </ul>

**Table 9:** The present situation at Efogi No 1 and Efogi No 2 villages.

<b>4. EFOGI No. 1 and 2 VILLAGE</b> KOIARI LLG; WARD 17 (Efogi 1, Efogi 2, Envilogo, Hailogo)	
<u>Livelihood Assets</u>	
<p><b>Financial resources:</b> The residents of Efogi 1 and Efogi 2 (Launumu) source:</p> <ul style="list-style-type: none"> <li>• Most of their income from part-time tourism related activities, including: portering, guest house / campsite accommodation and meals, track maintenance and ward development grants (from KTA);</li> <li>• Some income comes from market sales, namely: village products (e.g. vegetables and baskets) to Port Moresby residents and Port Moresby products (e.g. soap and rice) to village residents;</li> <li>• Some funds for one-off activities (e.g. bride price and village projects) from relatives in Port Moresby.</li> </ul> <p>Village residents have poor access to formal credit (e.g. banking or micro-finance institutions) and informal credit (e.g. savings clubs or money lenders).</p>	
<p style="text-align: center;"><b>Figure 52:</b> Main sources of village income</p>	<p style="text-align: center;"><b>Figure 53:</b> Village resident access to credit</p>
<p><b>Human resources:</b> Efogi 1 and Efogi 2 were established in the 1920s when people moved down to the Elome Creek and the Efogi River where their Church pastor was located. The total population is around 400 (56 households) with an additional 800 people living in Port Moresby.</p> <p>Education levels within Efogi 1 and Efogi 2 are moderate with 17 secondary qualifications and 7 tertiary qualifications. Work experience is restricted to the tourism sector. There are 15 guesthouses/campsites participating successfully in the KTA certification programme, which provide part-time work for village residents (around 50% female). There is one local tour company based at Efogi 2.</p> <p>Overall, male qualifications and work experience levels are greater than their female counterparts.</p>	
<p style="text-align: center;"><b>Figure 54:</b> Village resident age groups</p>	<p style="text-align: center;"><b>Figure 55:</b> Village residents and Port Moresby residents</p>

**Table 9:** The present situation at Efogi No 1 and Efogi No 2 villages (continued).

<b>Livelihood Assets</b>	
<p><b>Figure 56:</b> Village resident qualifications</p>	<p><b>Figure 57:</b> Village resident work experience</p>
<p><b>Natural resources:</b> Efogi 1 and Efogi 2 are located around 1,200m. above sea level. Village residents comprise 4 clan groups. Their land is held under customary title, and contains large areas of primary and secondary forest (for shifting cultivation) radiating out from the 2 villages.</p>	
<p><b>Figure 58:</b> Land cover</p>	<p><b>Figure 59:</b> Land ownership</p>
<p><b>Physical resources:</b> Efogi 1 and Efogi 2 village residents have access to:</p> <ul style="list-style-type: none"> <li>• Third level airstrip which provides scheduled flights (around 3 flights per week) and charter flights to Port Moresby. Scheduled airfares are currently 250 kina per person and 2.50 kina per kilogram;</li> <li>• Elementary and primary (lower and upper) schools at Efogi 1 (good condition);</li> <li>• Community health centre with maternal care at Efogi 1 (good condition);</li> <li>• Secondary boarding school at Sogeri and others in Port Moresby;</li> <li>• Village VHF radio for communication with KTA and DoH, but no mobile network (landowners have not accepted Digicel’s offer to establish a network along the track, since some leaders are concerned about the negative effects of increased social networks on their community);</li> <li>• Clean, piped water from a gravity fed system (some maintenance needed).</li> </ul> <p>Each household is responsible for securing its own power supply. All households have a small solar panel for lighting (donated by KTF), and 5 have their own generator.</p>	
<p><b>Figure 60:</b> Access to markets and services</p>	<p><b>Figure 61:</b> Access to reliable power supply</p>

**Table 9:** The present situation at Efogi No 1 and Efogi No 2 villages (continued).

<b>Structures and Processes</b>
<p><b>External structures and processes:</b> The residents of Efogi 1 and Efogi 2 interact with a variety of external agencies, including:</p> <ul style="list-style-type: none"> <li>• <u>AusAID:</u> The Community Development Scheme funded the village water supply systems at Efogi 1 and Efogi 2.</li> <li>• <u>Department of Environment &amp; Conservation:</u> There appears to be minimal understanding about Goal 3 of the KI Design Document, namely: <i>the wise use and conservation of the catchment protection area, including the Kokoda Track and its natural and cultural resources and values</i>. Although, DEC staff arrived in 2010 to discuss natural resource management issues - they have not returned or provided any follow-up Information.</li> <li>• <u>Kokoda Development Program:</u> The KDP provided the materials for the village water supply system, elementary school classroom, and health centre at Efogi 1 (KTF is funding the elementary teacher and health worker).</li> <li>• <u>Kokoda Track Authority:</u> There are 2 KTA rangers based in Efogi (one is supposed to be stationed at Naduri) who communicate with the KTA office via VHF radio. There is a KTA office at Efogi 1 (rented from the village). The 2 rangers were not present during the study. The KTA track maintenance program and ward development grants provide an additional source of income. Overall, people have limited understanding about Livelihoods Project Plan (no documents have been seen).</li> </ul> <p>The Livelihoods/Micro-business Support Project has provided 2 basic business/financial management trainings for the CBMs. The current Livelihoods Project has worked with some Efogi village residents through their 2CBMs, often using Efogi 1 as the training centre for Central Province. The project is also establishing a drying room enterprise at the elementary school and basing a sawmill project at Efogi (refer Section 4.3, page 47). In spite of this, people have limited understanding about the Livelihoods Project Plan (no documents have been seen).</p> <ul style="list-style-type: none"> <li>• <u>Kokoda Track Foundation:</u> KTF is currently paying the elementary teacher and health worker until these positions has been absorbed by the government’s Department of Personnel Management. They have also provided some HIV/AIDS peer awareness and training, a women’s training course on village baking for tourists at Efogi 2, as well as some school fee subsidies for top students.</li> <li>• <u>National government:</u> The member for Kairuku-Hiri District is based in Port Moresby.</li> <li>• <u>Sub-national government:</u> The Koiari LLG office, Kairuku-Hiri District headquarters, and the Central Province Administration are all based in Port Moresby. Overall, village residents have limited access to the District Service Improvement Program. Government regulations that restrict landowner ability to use their resources are also minimal.</li> <li>• <u>Rotary International:</u> The primary school at Efogi 1 was funded by the Rotary Club of Australia.</li> <li>• <u>Seventh Day Adventist Church:</u> The SDA Church has widespread, ongoing and day-to-day influence. This institution is both well-organized and well-respected at all levels with its district office in Efogi 2, national office in Port Moresby, regional office in Australia and global headquarters in USA.</li> <li>• <u>Third Level Airlines:</u> Overall, people expressed a need for more frequent and cheaper (e.g. subsidized) air services to Port Moresby to facilitate access to essential services.</li> <li>• <u>Tour Companies:</u> Overall, collaboration with tour companies was seen to be meeting the needs of the trekkers; working mostly through KTA’s VHF radio network. However, tour guide and porter fees have not kept pace with inflation, and KTA conditions for local staff were not always followed, particularly: (i) loads less than 22.5 kg, and (ii) return flight (or equivalent in cash) at end of each trek.</li> </ul>

**Table 9:** The present situation at Efogi No 1 and Efogi No 2 villages (continued).

<b><u>Structures and Processes</u></b> (continued)
<p><b>Internal structures and processes:</b> The residents of Efogi 1 and Efogi 2 villages also interact with some important internal structures and decision-making processes:</p> <ul style="list-style-type: none"> <li>• <b>Clan Groups:</b> Landownership issues are dealt with by the leaders of the 4 patrilineal clan groups. There are currently no significant landownership disputes. It has not been necessary for any clan to form an Incorporated Land Groups formed.</li> <li>• <b>Community-based mentors:</b> There are 2 KTA funded CBMs based in Efogi 1 (1 male and 1 female), and one male CBM based in Efogi 2. Communication with the KTA office is via VHF radio. All three CBMs have participated well in the various KTA trainings, many of which have been held at Efogi 2 (central location). Overall, their outputs to date have been better than the other CBMs.</li> <li>• <b>Local Government:</b> The Ward Councillor is based in Port Moresby, which makes communication with village residents difficult and communication with external agencies (e.g. KTA and LLG officers) easier. The study team did not meet any ward development committee representatives (although the councillor was invited to take part in the study).</li> <li>• <b>SDA Church Board:</b> The SDA church pastor and board members are based in Efogi 1 (district HQ); providing overall guidance on the village congregation’s social, physical, mental and spiritual development.</li> </ul>
<b><u>Livelihood Strategies</u></b>
<p><b>Current strategies:</b> The residents of Efogi 1 and Efogi 2 are well focused on feeding, housing and educating their family, as well as contributing to their various clan and village obligations. Households are generally able to meet their priority needs through:</p> <ul style="list-style-type: none"> <li>• Subsistence activities (e.g. gardening, fishing / hunting as per SDA guidelines, collecting firewood for cooking, and timber and bush materials for shelter);</li> <li>• Market sales in Port Moresby and village (village porters often bring back goods from Port Moresby for sale in the village and relatives in Port Moresby often assist with sale of garden food, bilums, baskets etc);</li> <li>• Part-time tourism related activities (Efogi 1 and 2 are on the main track). There are 15 guesthouses / campsites participating successfully in the KTA certification programme. There is also one local tour company based at Efogi 2;</li> <li>• Remittances from relatives for one-off activities.</li> </ul> <p>Previous income generation strategies are also visible, namely:</p> <ul style="list-style-type: none"> <li>• Old mandarin orchards around houses are neglected due to low yields and high transport costs. These trees used to provide a valuable, seasonal household income;</li> <li>• Coffee plantings are also neglected due to high transport costs (nearest market is Lea). The Koiari Development Authority previously established a coffee mill at 17 Mile which provided a welcome market (now run down). Also, the SDA church does not encourage the habit of drinking coffee.</li> </ul>
<p><b>Proposed strategies:</b> Meeting participants recommended the KTA Livelihoods Project::</p> <ul style="list-style-type: none"> <li>• Supports income generation activities (e.g. provide training and follow-up training; subsidize freight costs; provide small-business start-up loans; establish community catering centre for tourists using local produce);</li> <li>• Assist the community establish a landowner company that looks after community affairs and livelihoods using revenue from trekking;</li> <li>• Ensures CBMs receive adequate training, and follow-up training to build local capacity;</li> <li>• Establish livelihoods resource centre at Efogi 1 that provides a focal point for the community and trekkers.</li> </ul>

**Table 10:** The present situation at Manari village.

5. MANARI VILLAGE	
KOIARI LLG; WARD 18 (Manari, Nauro 1, Nauro 2, Ioribaiva, Madilogo)	
<u>Livelihood Assets</u>	
<p><b>Financial resources:</b> The residents of Manari (No 1 and 2) source:</p> <ul style="list-style-type: none"> <li>• Most of their income from part-time tourism related activities, including: portering, guest house / campsite accommodation and meals, track maintenance and ward development grants (from KTA);</li> <li>• Some income comes from market sales, namely: village products (e.g. vegetables and baskets) to Port Moresby residents and Port Moresby products (e.g. soap and rice) to village residents. There is one family owned trade store (established with start-up funding from KTA ward development funds);</li> <li>• Some funds for one-off activities (e.g. bride price and village projects) from relatives in Port Moresby.</li> </ul> <p>Village residents have poor access to formal credit (e.g. banking or micro-finance institutions) and informal credit (e.g. savings clubs or money lenders).</p>	
<p><b>Figure 62:</b> Main sources of village income</p>	<p><b>Figure 63:</b> Village resident access to credit</p>
<u>Livelihood Assets</u>	
<p><b>Human resources:</b> Manari village was established in the 1930s. The total population is around 400 with an additional 500 people living in Port Moresby.</p> <p>Village resident qualifications are moderate with 8 secondary qualifications and 6 tertiary qualifications. Work experience is restricted to the tourism sector. There are 7 family owned village guesthouses / campsites participating successfully in the KTA guesthouse certification program, which provide part-time work for village residents (around 50% female). There is also one local tour company based in Port Moresby.</p> <p>Overall, male qualifications and work experience levels are greater than their female counterparts.</p>	
<p><b>Figure 64:</b> Village resident age groups</p>	<p><b>Figure 65:</b> Village residents and Port Moresby residents</p>



**Table 10:** The present situation at Manari village (continued).

<b>Livelihood Assets (continued)</b>	
<p><b>Figure 66:</b> Village resident qualifications</p>	<p><b>Figure 67:</b> Village resident work experience</p>
<p><b>Natural resources:</b> Manari is located around 800m. above sea level. Village residents comprise 1 clan group. Their land is held under customary title, and contains large areas of primary and secondary forest (for shifting cultivation) radiating out from the 2 villages.</p>	
<p><b>Figure 68:</b> Land cover</p>	<p><b>Figure 69:</b> Land ownership</p>
<p><b>Physical resources:</b> Manari village residents have access to:</p> <ul style="list-style-type: none"> <li>• Third level airstrip which provides scheduled flights (around 3 flights per week) and charter flights to Port Moresby. Scheduled airfares are currently 250 kina per person and 2.50 kina per kilogram;</li> <li>• Elementary and primary (lower and upper) schools at Manari (adequate condition);</li> <li>• Aid post (adequate condition) with maternal care (poor condition) at Manari;</li> <li>• Secondary boarding school at Sogeri and others in Port Moresby;</li> <li>• Village VHF radio for communication with KTA (recently damaged) and DoH, but no mobile network (landowners have not accepted Digicel’s offer to establish a network along the track, since some leaders are concerned about the negative effects of increased social networks on their community);</li> <li>• Clean, piped water from a gravity fed system.</li> </ul>	
<p>Each household is responsible for securing its own power supply. Around 75% households have a small solar panel for lighting (donated by KTF).</p>	
<p><b>Figure 70:</b> Access to markets and services</p>	<p><b>Figure 71:</b> Access to reliable power supply</p>

**Table 10:** The present situation at Manari village (continued).

<u>Structures and Processes</u>
<p><b>External structures and processes:</b> The residents of Manari interact with a variety of external agencies, including:</p> <ul style="list-style-type: none"> <li>• <u>AusAID:</u> The Community Development Scheme (now Strongim Pipol Strongim Nesen Program) funded the village water supply system.</li> <li>• <u>Department of Environment &amp; Conservation:</u> There appears to be minimal understanding about Goal 3 of the KI Design Document, namely: <i>the wise use and conservation of the catchment protection area, including the Kokoda Track and its natural and cultural resources and values</i>. Although there is a view that the track benefits trekkers more than landowners.</li> <li>• <u>Kokoda Development Program:</u> The KDP provided materials for the primary school extension (a tour company provided chain saw-mill and fuel for cutting the timber), and SDA church is funding the health worker. KDP is also funding the provision of medicine for the aid post.</li> <li>• <u>Kokoda Track Authority:</u> There is one KTA ranger based in Manari who communicates with the KTA office via VHF radio. The ranger took part in the study activities, and did a great job facilitating the meetings with community representatives. The KTA track maintenance program and ward development grants provide an additional source of income. However, there is concern that non-landowner teams are engaged to do track maintenance work.</li> </ul> <p>The Livelihoods/Micro-business Support Project has provided 2 basic business/financial management trainings for CBMs. The current Livelihoods Project has worked with some Manari village residents through their 2 CBMs (refer Section 4.3, page 47). However, people have limited understanding about Livelihoods Project Plan (no documents have been seen).</p> <ul style="list-style-type: none"> <li>• <u>National government:</u> The member for Kairuku-Hiri District is based in Port Moresby.</li> <li>• <u>Sub-national government:</u> The Koiari LLG office, Kairuku-Hiri District headquarters, and the Central Province Administration are all based in Port Moresby. Overall, village residents have limited access to the District Service Improvement Program. Government regulations that restrict landowner ability to use their resources are also minimal.</li> <li>• <u>PNG Law and Justice Sector:</u> Village law and justice officers have attended a training course arranged by the LJS at Manari.</li> <li>• <u>Rotary International:</u> The aid post was built with support from the Rotary Club of Australia.</li> <li>• <u>Seventh Day Adventist Church:</u> The SDA Church has widespread, ongoing and day-to-day influence. This institution is both well-organized and well-respected at all levels with its district office in Efogi 2, national office in Port Moresby, regional office in Australia and global headquarters in USA. The SDA church also pays for the health worker.</li> <li>• <u>Third Level Airlines:</u> Overall, people expressed a need for more frequent and cheaper (e.g. subsidized) air services to Port Moresby to facilitate access to essential services.</li> <li>• <u>Tour Companies:</u> Overall, collaboration with tour companies was seen to be meeting the needs of the trekkers; working mostly through KTA's VHF radio network. One tour company has provided a chain saw-mill and fuel for cutting timber for the primary school extension.</li> </ul> <p>However, tour guide and porter fees have not kept pace with inflation, and KTA conditions for local staff are not always followed, particularly: (i) loads less than 22.5 kg, and (ii) return flight (or equivalent in cash) at end of each trek. Also, tour guides do not often encourage their group to purchase local market produce (e.g. fruit) that has been prepared for their visit. Some PNG tour guides from outside the track area do not pay for their group's meals.</p>

**Table 10:** The present situation at Manari village (continued).

<b>Structures and Processes</b> (continued)
<p><b>Internal structures and processes:</b> The residents of Manari also interact with some important internal structures and decision-making processes:</p> <ul style="list-style-type: none"> <li>• <b>Clan Groups:</b> Landownership issues are dealt with by the leaders of the 1 patrilineal clan group. There are currently no significant landownership disputes. It has not been necessary for any clan to form an Incorporated Land Groups formed.</li> <li>• <b>Community-based CBMs:</b> There are 2 KTA funded community-based mentor based in Manari 1 (1 male and 1 female). The male CBM (also village councillor) spends around 75% of his time in Port Moresby (he was in Moresby during the study). Communication with the KTA office is via VHF radio. Both CBMs have participated well in the various KTA trainings. Overall, the female CBMs outputs to date have been better than her male counterpart.</li> <li>• <b>Local Government:</b> The Ward Councillor is based in Port Moresby, which makes communication with village residents difficult and communication with external agencies (e.g. KTA and LLG officers) easier. The study team did not meet any ward development committee representatives (although the councillor was invited to take part in the study). There are also 4 village magistrates (2 male and 2 female) and one policeman.</li> <li>• <b>SDA Church Board:</b> The SDA church pastor and board members are based in Manari 1; providing overall guidance on the village congregation’s social, physical, mental and spiritual development.</li> </ul>
<b>Livelihood Strategies</b>
<p><b>Current strategies:</b> The residents of Manari are well focused on feeding, housing and educating their family, as well as contributing to their various clan and village obligations. Households are generally able to meet their priority needs through:</p> <ul style="list-style-type: none"> <li>• Subsistence activities (e.g. gardening, fishing / hunting as per SDA guidelines, collecting firewood for cooking, and timber and bush materials for shelter).</li> <li>• Market sales in Port Moresby and village (village porters often bring back goods from Port Moresby for sale in the village, and relatives in Port Moresby often assist with sale of garden food, okari nuts, bilums, baskets etc).</li> <li>• Part-time tourism related activities (Manari 1 and 2 are on the main track). There are 7 family owned village guesthouses / campsites participating successfully in the KTA guesthouse certification program, and also one local tour company.</li> <li>• Remittances from relatives for one-off activities.</li> </ul> <p>Previous income generation strategies are also visible, namely:</p> <ul style="list-style-type: none"> <li>• Old mandarin orchards around houses are neglected due to low yields and high transport costs. These trees used to provide a valuable, seasonal household income.</li> <li>• Coffee plantings are also neglected due to high transport costs (nearest market is Lea). The Koiari Development Authority previously established a coffee mill at 17 Mile which provided a welcome market (now run down). Also, the SDA church does not encourage the habit of drinking coffee.</li> </ul>
<p><b>Proposed strategies:</b> Meeting participants recommended the KTA Livelihoods Project::</p> <ul style="list-style-type: none"> <li>• Supports income generation activities (e.g. provide training and follow-up training; assist with market Information; subsidize freight costs; provide small-business start-up loans; establish community catering centre for tourists that relieves pressure off individual guest houses for providing fuel wood and food.</li> <li>• Assists with production of local protein for households and tourists (e.g. women’s group fish pond; poultry). One family has just established a fish pond using their own funds.</li> <li>• Support activities that benefit older men and women (who are unable to earn income from portering). Women usually have to take on some of their husbands responsibilities when they are away portering).</li> <li>• Support low input community projects that can be sustained (e.g. fish ponds, agriculture).</li> <li>• Ensures CBMs receive adequate training, and follow-up training to build local capacity.</li> </ul>

### 3.3. Sites with neither Road nor Airport Access (Area 3)

Within the track area, there are around 7 villages in Central Province and 7 villages in Oro Province with neither road nor airport access. These sites have difficult connections to both district and provincial markets and services, as well as low land potential due to environmental constraints such as poor soils, long dry season and steep slopes.

Sections 3.3.1 and 3.3.2 present our baseline findings from the 5 sample villages with neither road nor airport access in Central and Oro Provinces.

#### 3.3.1. Central Province

Table 11 presents the baseline findings from the 3 sample villages along the inland ranges of Central Province.

**Table 11:** The present situation in Ioribaiva village.

<b>1. IORIBAIVA VILLAGE</b>
KOIARI LLG; WARD 18 (Manari, Nauro 1, Nauro 2, Ioribaiva, Madilogo)
Ioribaiva is located around 600m. above sea level. The village survey could not be completed since there was only one guest house owner and his family present when the survey team arrived. The councillor was invited to take part in the study, but unfortunately most people were away in Port Moresby.

**Table 12:** The present situation in Nauro No 1 village.

<b>2. NAURO No 1 VILLAGE</b>
KOIARI LLG; WARD 18 (Manari, Nauro 1, Nauro 2, Ioribaiva, Madilogo)
Nauro 1 is located around 800m. above sea level. The village survey at Nauro 1 could not be undertaken since there were no village residents present when the survey team arrived. The councillor was invited to take part in the study, but unfortunately most people were away in Port Moresby.

**Table 13:** The present situation at Nauro No 2 village.

<b>3. NAURO No 2 VILLAGE</b>
KOIARI LLG; WARD 18 (Manari 1, Manari 2, Nauro 1, Nauro 2, Urivaiva, Madilogo)
<b><u>Livelihood Assets</u></b>
<b>Financial resources:</b> The residents of Nauro 2 source: <ul style="list-style-type: none"> <li>• Most of their income from part-time tourism related activities, including portering, selling produce at Nauro 1, track maintenance and ward development grants (from KTA);</li> <li>• Some income comes from market sales, namely: village products (e.g. vegetables and baskets) to Port Moresby residents and Port Moresby products (e.g. soap and rice) to village residents;</li> <li>• Some funds for one-off activities (e.g. bride price and village projects) from relatives in Port Moresby.</li> </ul> Village residents have poor access to formal credit (e.g. banking or micro-finance institutions) and informal credit (e.g. savings clubs or money lenders).

**Table 13:** The present situation at Nauro No 2 village (continued).

<b>Livelihood Assets (continued)</b>	
 <p><b>Figure 72:</b> Main sources of village income</p>	 <p><b>Figure 73:</b> Village resident access to credit</p>
<p><b>Human resources:</b> Nauro 2 was established in 2001-2 when people moved away from the Nauro River where the death rate had become unusually high. The new location has led to a reduced death rate, together with reduced access to trekkers and government services. The total population is around 89 with an additional 100 people living in Port Moresby.</p> <p>Village resident qualifications are low with 1 secondary qualification and 1 tertiary qualification. Work experience is restricted to the tourism sector. There are no village guesthouses/campsites since the village is around 3km from the Kokoda Track, so women have minimal participation in the tourism sector (mostly male portering).</p>	
 <p><b>Figure 74:</b> Village resident age groups</p>	 <p><b>Figure 75:</b> Village residents and Port Moresby residents</p>
 <p><b>Figure 76:</b> Village resident qualifications</p>	 <p><b>Figure 77:</b> Village resident work experience</p>

**Table 13:** The present situation at Nauro No 2 village (continued).

<b>Livelihood Assets</b> (continued)	
<p><b>Natural resources:</b> Nauro 2 is located around 800m. above sea level. Village residents of comprise 7 clan groups. Their land is held under customary title, and contains large areas of primary and secondary forest (for shifting cultivation), mostly to the east (either side of Brown River)</p>	
<p><b>Figure 78:</b> Land cover</p>	<p><b>Figure 79:</b> Land ownership</p>
<p><b>Physical resources:</b> Nauro 2 village residents have access to:</p> <ul style="list-style-type: none"> <li>• Elementary school at Nauro 2 (not functioning due to no teacher);</li> <li>• Lower primary school at Manari 1 (adequate condition) which means children have to stay with relatives at Manari;</li> <li>• Upper primary at Efogi 1 (good condition) or Kavovo (good condition, but teachers not always there due to inadequate housing), which means children have to stay with relatives living nearby;</li> <li>• Secondary boarding school at Sogeri and others in Port Moresby;</li> <li>• Aid post at Nauro 1 (not functioning due to no health worker);</li> <li>• Village VHF radio for communication with KTA but no mobile network (landowners have not accepted Digicel's offer to establish a network along the track, since some leaders are concerned about the negative effects of increased social networks on their community);</li> <li>• Clean, piped water from a gravity fed system built with support from a tour company;</li> <li>• The Mount Kodu access road to Port Moresby has not been used since the exploration license over the Kodu deposit expired in 2008.</li> </ul> <p>Each household is responsible for securing its own power supply. Three households have a solar panel for lighting.</p>	
<p><b>Figure 80:</b> Access to markets and services</p>	<p><b>Figure 81:</b> Access to reliable power supply</p>



**Table 13:** The present situation at Nauro No 2 village (continued).

<b><u>Structures and Processes</u></b>
<p><b>External structures and processes:</b> The residents of Nauro 2 interact with a variety of external agencies, including:</p> <ul style="list-style-type: none"> <li>• <b><u>Department of Environment &amp; Conservation:</u></b> There appears to be minimal understanding about Goal 3 of the KI Design Document, namely: <i>the wise use and conservation of the catchment protection area, including the Kokoda Track and its natural and cultural resources and values</i>. Although, DEC staff and a foreign adviser arrived in 2009 to discuss natural resource management issues and carbon trade opportunities - they have not returned or provided any follow-up Information.</li> <li>• <b><u>Kokoda Development Program:</u></b> The KDP provided roofing for the elementary school.</li> <li>• <b><u>Kokoda Track Authority:</u></b> There is one KTA ranger based in Manari 1 who communicates with the KTA office via VHF radio. The KTA track maintenance program and ward development grants provide an additional source of income. The Livelihoods/Micro-business Support Project has provided 2 basic business/financial management trainings for the 2 CBMs. In 2010, this project initiated 3 unsuccessful pilot projects (fruit &amp; vegetables, poultry, and goats) with support from NARI. The Livelihoods Project has worked with some Nauro 2 village residents through the CBM (refer Section 4.3, page 47).</li> <li>• <b><u>National government:</u></b> The member for Kairuku-Hiri District is based in Port Moresby.</li> <li>• <b><u>Sub-national government:</u></b> The Koiari LLG office, Kairuku-Hiri District headquarters, and the Central Province Administration are all based in Port Moresby. Overall, village residents have limited access to the District Service Improvement Program. Government regulations that restrict landowner ability to use their resources are also minimal.</li> <li>• <b><u>Seventh Day Adventist Church:</u></b> The SDA Church has widespread, ongoing and day-to-day influence. This institution is both well-organized and well-respected at all levels with its district office in Efogi 2, national office in Port Moresby, regional office in Australia and global headquarters in USA. The SDA church also pays for the health worker.</li> <li>• <b><u>Tour Companies:</u></b> Overall, collaboration with tour companies was seen to be meeting the needs of the trekkers; working mostly through KTA’s VHF radio network.  However, tour guide and porter fees have not kept pace with inflation, and KTA conditions for local staff are not always followed, particularly: (i) loads less than 22.5 kg, and (ii) return flight (or equivalent in cash) at end of each trek.</li> </ul>
<p><b>Internal structures and processes:</b> The residents of Nauro 2 also interact with some important internal structures and decision-making processes:</p> <ul style="list-style-type: none"> <li>• <b><u>Clan Groups:</u></b> Landownership issues are dealt with by the leaders of the 7 patrilineal clan groups. There are currently no significant landownership disputes. It has not been necessary for any clan to form an Incorporated Land Groups formed.</li> <li>• <b><u>Community-based mentors:</u></b> There is one male KTA funded CBM based in Nauro 2. Communication with the KTA office is via VHF radio. He participated in the Livelihoods/Micro-business Support Project activities, but has not taken part in any of the more recent Livelihoods Project activities.</li> <li>• <b><u>Local Government:</u></b> The Ward Councillor is based in Port Moresby, which makes communication with village residents difficult and communication with external agencies (e.g. KTA and LLG officers) easier. The study team did not meet any ward development committee representatives (although the councillor was invited to take part in the study). Meetings were facilitated by the magistrate and CBM.</li> <li>• <b><u>SDA Church Board:</u></b> The SDA church pastor and board members are based in Nauro 2; providing overall guidance on the village congregation’s social, physical, mental and spiritual development.</li> </ul>

**Table 13:** The present situation at Nauro No 2 village (continued).

<b>Livelihood Strategies</b>
<p><b>Current strategies:</b> The residents of Nauro 2 are well focused on feeding, housing and educating their family, as well as contributing to their various clan and village obligations. Households are generally able to meet their priority needs through:</p> <ul style="list-style-type: none"> <li>• Subsistence activities (e.g. gardening, fishing / hunting as per SDA guidelines, collecting firewood for cooking, and timber and bush materials for shelter);</li> <li>• Market sales in Port Moresby and village (village porters often bring back goods from Port Moresby for sale in the village, and relatives in Port Moresby often assist with sale of garden food, okari nuts, bilums, baskets etc);</li> <li>• Part-time tourism related activities. Nauro 2 is around 3 km away from the main track so there are no guest houses / campsites and most income comes from portering with some tourist sales (e.g. fruit) at Nauro 1;</li> <li>• Remittances from relatives for one-off activities;</li> </ul>
<p><b>Proposed strategies:</b> Meeting participants recommended the KTA Livelihoods Project:</p> <ul style="list-style-type: none"> <li>• Supports income generation activities (e.g. women’s group sewing business for local and Port Moresby markets, and community owned tour company that provides income generation opportunities for all);</li> <li>• Ensures CBMs receive adequate training, and follow-up training to build local capacity.</li> </ul>

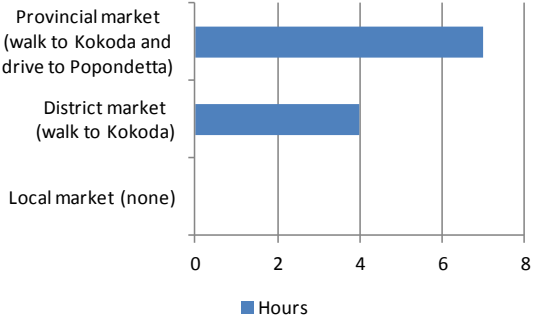

### 3.3.2. Oro Province

Table 14 presents the baseline findings from the 2 sample villages that were visited along the less productive inland ranges of Oro province.

**Table 14:** The present situation at Isurava village.

<b>4. ISURAVA VILLAGE KOKODA LLG; WARD 9</b>
<b>Livelihood Assets</b>
<p><b>Human resources:</b> Isurava was established in the 1950’s. The total population is around 35. There are 4 guesthouses which are participating well in the KTA certification programme.</p>
<p><b>Financial resources:</b> Village residents source most of their income from:</p> <ul style="list-style-type: none"> <li>• Market sales, namely: village products (e.g. fruit and vegetables) to district and provincial markets, and imported products (e.g. soap and rice) to village residents;</li> <li>• Tourism related activities including portering, guest house / campsite accommodation and meals, as well as track maintenance payments &amp; ward development grants (from KTA).</li> </ul> <p>Village residents have poor access to formal and informal credit services.</p>
<p><b>Natural resources:</b> Isurava is located around 1,400m. above sea level. Village residents comprise 2 clan groups. Their land is held under customary title, and contains:</p> <ul style="list-style-type: none"> <li>• Primary forest;</li> <li>• Secondary forest (for shifting cultivation).</li> </ul>
<p><b>Physical resources:</b> Isurava village residents have access to:</p> <ul style="list-style-type: none"> <li>• Isurava memorial and medevac site (around 0.5 hour walk);</li> <li>• Nearest elementary school at Alola (around 1 hour walk);</li> <li>• Lower and upper primary school at Abuari (up to 1.5 hour walk);</li> <li>• Secondary school at Kokoda (up to 3 hour walk);</li> <li>• Aid post at Alola and district health centre at Kokoda (around 4 hour walk);</li> <li>• Village VHF radios for communication with KTA and DoH, as well as poor mobile network;</li> <li>• Clean, piped water from gravity fed system (with support from Australian War Graves Memorial).</li> </ul> <p>Each household is responsible for securing its own power supply.</p>

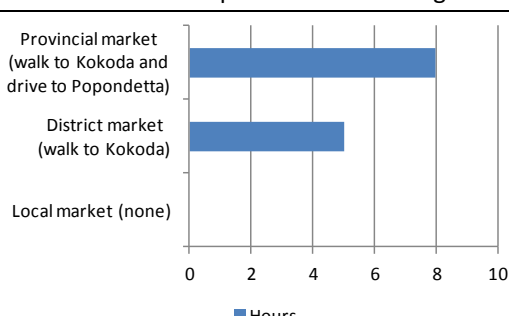
**Table 14:** The present situation at Isurava village (continued).

<b>Livelihood Assets (continued)</b>	
 <p><b>Figure 82:</b> Access to markets and services</p>	 <p><b>Figure 83:</b> KTA Guesthouse certification programme toilet</p>
<b>Structures and Processes</b>	
<p><b>External structures and processes:</b> The residents of Isurava interact with some external agencies, including:</p> <ul style="list-style-type: none"> <li>• <u>Australian War Graves Memorial:</u> Provided poly pipes for village water supply system.</li> <li>• <u>Kokoda Development Program:</u> KDP assists with health and education.</li> <li>• <u>Kokoda Track Authority:</u> There is 1 Ranger and 1 CBM (male) at Isurava. The Livelihoods/Micro-business Support Project has provided 2 basic business/financial management trainings for CBMs. The current Livelihoods Project has worked with some Isurava village residents through their CBM (refer Section 4.3, page 47).</li> <li>• <u>National government:</u> The member for Sohe District is based in Port Moresby and Popondetta.</li> <li>• <u>Seventh Day Adventist Church:</u> The SDA Church has widespread, ongoing and day-to-day influence. This institution is both well-organized and well-respected at all levels with its district office in Kokoda, national office in Port Moresby, regional office in Australia and global headquarters in USA.</li> <li>• <u>Sub-national government:</u> The Kokoda LLG office and is based in Kokoda Station and the Sohe District headquarters and Oro Province Administration are based in Popondetta.</li> <li>• <u>Tour operators:</u> One tour company has supplied 2 baking ovens and 2 sewing machines to women at Isurava (currently not working and in need of maintenance).</li> </ul>	
<p><b>Internal structures and processes:</b> The residents of Isurava also interact with some important internal structures and decision-making processes:</p> <ul style="list-style-type: none"> <li>• <u>Clan Groups:</u> Landownership issues are dealt with by the leaders of the 2 patrilineal clan groups. There are currently no significant landownership disputes. It has not been necessary for any clan to form an Incorporated Land Group.</li> <li>• <u>Community-based mentors:</u> There is 1 KTA funded CBM (male) based in Isurava who met with the study team. Communication with the KTA office is via VHF radio.</li> <li>• <u>Local Government:</u> The Isurava Ward Councillor is based in Isurava, which makes communication with village residents easy. The study team met with the Ward Councillor in Kokoda Station.</li> <li>• <u>SDA Church Board:</u> The SDA church pastor and board members are based in Isurava; providing overall guidance on the village congregation’s social, physical, mental and spiritual development.</li> </ul>	
<b>Livelihood Strategies</b>	
<p><b>Current strategies:</b> Isurava residents are generally able to meet their priority needs through:</p> <ul style="list-style-type: none"> <li>• Subsistence activities (e.g. gardening, fishing / hunting, collecting firewood for cooking, and timber and bush materials for shelter);</li> <li>• Market sales to district and provincial markets (mostly fruit and vegetables);</li> <li>• Part-time tourism related activities (there are 4 guesthouse/campsites which are participating well in the KTA certification programme).</li> </ul>	
<p><b>Proposed strategies:</b> Survey participants proposed the following livelihoods strategies:</p> <ul style="list-style-type: none"> <li>• Establish an umbrella landowner company to ensure acceptable sharing of benefits from tourism;</li> <li>• Upgrade Kokoda airstrip so that flights can come in direct from Australia;</li> </ul>	

**Table 14:** The present situation at Isurava village (continued).

<u>Livelihood Strategies</u> (continued)
<ul style="list-style-type: none"> <li>• Provide adequate training and follow up visits. Don't introduce new ideas and then walk away as was done in 2010 under the KTA Livelihoods/Micro-business Support Project when 2 unsuccessful poultry projects were initiated with support from NARI. Village community needs to actively participate and take ownership in tourism related activities to generate income;</li> <li>• Establish a cool storage shelter / processing facility for vegetables at Kokoda Station, and open up market access for village people;</li> <li>• Establish a wholesale market... small projects like the ones put here have not worked; therefore, a wholesale should be considered;</li> <li>• A community resource centre is a need for the community especially with the War Memorial Site located at Battlefield;</li> <li>• Upgrade the guesthouse / campsite facility.</li> </ul>

**Table 15:** The present situation at Alola village.

<b>5. ALOLA VILLAGE (including Battlefield)</b> KOKODA LLG; WARD 9									
<u>Livelihood Assets</u>									
<p><b>Human resources:</b> Alola was established in the 1950's. The total population is around 60 (including the residents at Battlefield). There are 5 guesthouses which are participating well in the KTA certification programme.</p>									
<p><b>Financial resources:</b> Village residents source most of their income from:</p> <ul style="list-style-type: none"> <li>• Market sales, namely: village products (e.g. fruit and vegetables) to district and provincial markets, and imported products (e.g. soap and rice) to village residents;</li> <li>• Tourism related activities including portering, guest house / campsite accommodation and meals, as well as track maintenance payments &amp; ward development grants (from KTA);</li> </ul> <p>Village residents have poor access to formal and informal credit services.</p>									
<p><b>Natural resources:</b> Alola is located around 1,300m. above sea level. Village residents comprise 3 clan groups. Their land is held under customary title, and contains:</p> <ul style="list-style-type: none"> <li>• Primary forest;</li> <li>• Secondary forest (for shifting cultivation).</li> </ul>									
<p><b>Physical resources:</b> Alola village residents have access to:</p> <ul style="list-style-type: none"> <li>• Elementary school at Alola (good condition);</li> <li>• Lower and upper primary school at Abuari (around 0.5 hour walk)</li> <li>• Secondary school at Kokoda (around 5 hour walk);</li> <li>• Aid post at Abuari in adequate condition (0.5 hour walk) and district health centre at Kokoda (5 hour walk);</li> <li>• Village VHF radios for communication with KTA, as well as poor mobile network;</li> <li>• Clean, piped water from a gravity fed system (with support Australian War Graves Memorial);</li> </ul> <p>Each household is responsible for securing its own power supply.</p>									
 <table border="1"> <caption>Data for Figure 84: Access to markets and services</caption> <thead> <tr> <th>Market Type</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>Provincial market (walk to Kokoda and drive to Popondetta)</td> <td>8</td> </tr> <tr> <td>District market (walk to Kokoda)</td> <td>5</td> </tr> <tr> <td>Local market (none)</td> <td>0</td> </tr> </tbody> </table>	Market Type	Hours	Provincial market (walk to Kokoda and drive to Popondetta)	8	District market (walk to Kokoda)	5	Local market (none)	0	
Market Type	Hours								
Provincial market (walk to Kokoda and drive to Popondetta)	8								
District market (walk to Kokoda)	5								
Local market (none)	0								
<p><b>Figure 84:</b> Access to markets and services</p>									

**Table 15:** The present situation at Alola village (continued).

<b><u>Structures and Processes</u></b>
<p><b>External structures and processes:</b> The residents of Alola interact with some external agencies, including:</p> <ul style="list-style-type: none"> <li>• <u>Australian War Graves Memorial:</u> Provided poly pipes for village water supply system.</li> <li>• <u>Kokoda Development Program:</u> KDP assists with health and education.</li> <li>• <u>Kokoda Track Authority:</u> The Livelihoods/Micro-business Support Project has provided 2 basic business/financial management trainings for CBMs. The current Livelihoods Project has worked with some Alola village residents through their CBM (refer Section 4.3, page 47).</li> <li>• <u>National government:</u> The member for Sohe District is based in Port Moresby and Popondetta.</li> <li>• <u>Seventh Day Adventist Church:</u> The SDA Church has widespread, ongoing and day-to-day influence. This institution is both well-organized and well-respected at all levels with its district office in Kokoda, national office in Port Moresby, regional office in Australia and global headquarters in USA.</li> <li>• <u>Sub-national government:</u> The Kokoda LLG office and is based in Kokoda Station and the Sohe District headquarters and Oro Province Administration are based in Popondetta.</li> <li>• <u>Tour operators:</u> One tour company has supplied 2 baking ovens and 2 sewing machines to women at Alola.</li> </ul>
<b><u>Structures and Processes</u></b> (continued)
<p><b>Internal structures and processes:</b> The residents of Alola also interact with some important internal structures and decision-making processes:</p> <ul style="list-style-type: none"> <li>• <u>Clan Groups:</u> Landownership issues are dealt with by the leaders of the 3 patrilineal clan groups. There are currently no significant landownership disputes. It has not been necessary for any clan to form an Incorporated Land Groups formed.</li> <li>• <u>Community-based CBMs:</u> There is 1 KTA funded CBM (female) based in Alola. She did not meet with the study team. Communication with the KTA office is via VHF radio.</li> <li>• <u>Local Government:</u> The Alola Ward Councillor is based in Alola, which makes communication with village residents easy. The study team met with the Ward Councillor at Kokoda Station.</li> <li>• <u>SDA Church Board:</u> The SDA church pastor and board members are based in Alola; providing overall guidance on the village congregation’s social, physical, mental and spiritual development.</li> </ul>
<b><u>Livelihood Strategies</u></b>
<p><b>Current strategies:</b> Alola residents are generally able to meet their priority needs through:</p> <ul style="list-style-type: none"> <li>• Subsistence activities (e.g. gardening, fishing / hunting, collecting firewood for cooking, and timber and bush materials for shelter);</li> <li>• Market sales to district and provincial markets (mostly fruit and vegetables);</li> <li>• Part-time tourism related activities (there are 5 guesthouses which are participating well in the KTA certification programme).</li> </ul>
<p><b>Proposed strategies:</b> Survey participants proposed the following livelihoods strategies:</p> <ul style="list-style-type: none"> <li>• People need to be educated to make informed choices. KTA should provide adequate training and follow up visits. Don’t introduce new ideas and then walk away as was done under the KTA Livelihoods / Micro-business Support Project. Village community needs to actively participate and take ownership in tourism related activities to generate income;</li> <li>• Resume rice and vegetable farming projects (rice mill should be provided at start to avoid rice going to waste as happened before);</li> <li>• Establish a cool storage shelter / processing facility for vegetables at Kokoda Station, and open up market access for village people;</li> <li>• Upgrade the guesthouse / campsite facility.</li> </ul>

#### 4. Livelihoods Project: Progress to-date

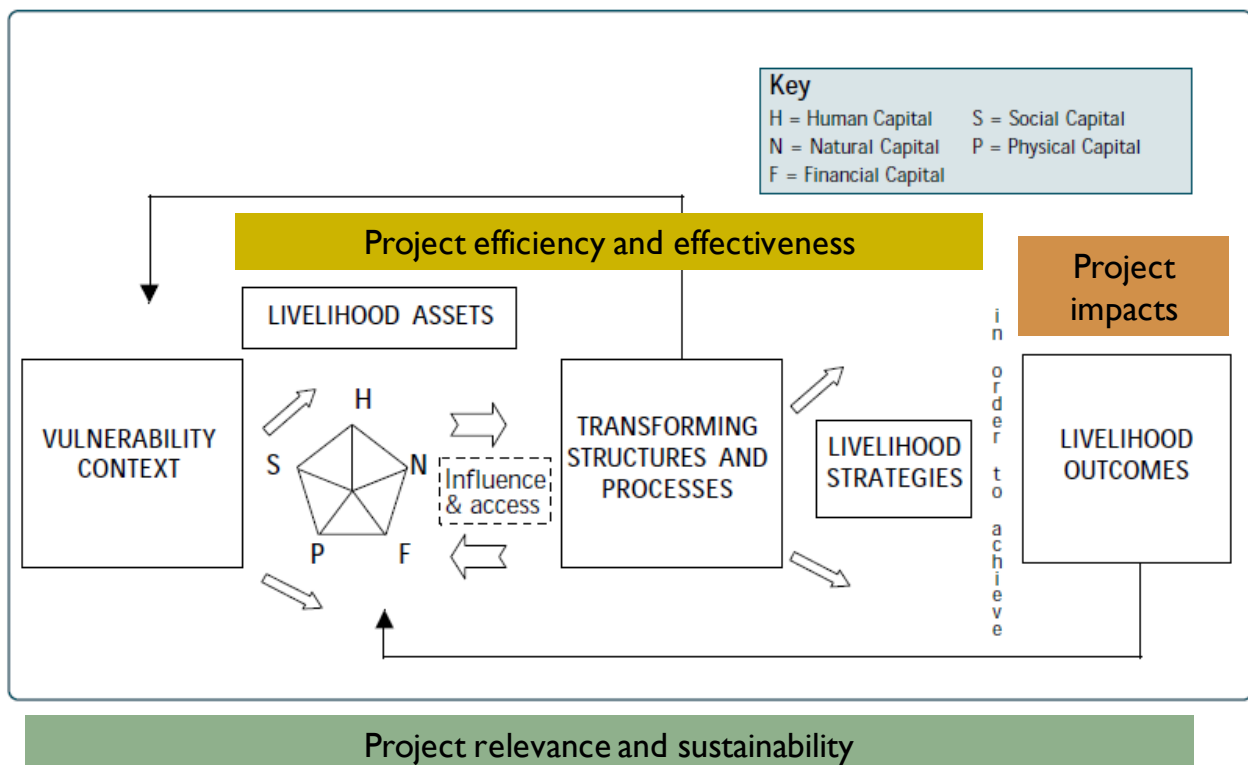
The Livelihoods Project was assessed with reference to the project’s annual work plans and reports, the livelihoods context (Section 3), the stakeholder consultations, and the 1<sup>st</sup> study objective below comprising 2 specific deliverables (Annex 9.1, page 109):

- **To evaluate the previous design and implementation of Livelihoods Project** since its inception in 2011<sup>3</sup> against its objectives.

The evaluation work was undertaken with reference to standard project assessment criteria, namely:

- **Relevance:** Is the Livelihoods Project consistent with the needs of local communities and the trekker market, as well the policies and priorities of key local, national and international stakeholders?
- **Efficiency:** Are the Livelihoods Project resources (physical and non-physical) being converted into the desired outputs in the most economical manner?
- **Effectiveness:** To what extent have the Livelihoods Project’s planned outputs and objectives been achieved?
- **Impact:** Is the Livelihoods Project making a contribution towards its long-term development goal, as well as influencing the development approaches of other agencies?
- **Sustainability:** Are the Livelihoods Project outputs likely to be used and/or developed after the implementation phase has been completed?

Figure 85 shows how each evaluation criteria relates to the Sustainable Livelihoods Framework.



**Figure 85:** Sustainable Livelihoods Framework with project evaluation criteria added (sourced from DFID, 1996).

<sup>3</sup> The Livelihoods / Micro-business Support Project (Pilots 1 and 2) was implemented during 2010 and is therefore beyond the scope of this evaluation. Annex 9.9 (page 122) contains the Evaluation Report (2011).



## 4.1. Relevance

*Is the Livelihoods Project consistent with the needs of local communities and the trekker market, as well the policies and priorities of local, national and international stakeholders?*

**Table 16:** Assessment of project relevance with reference to 6 questions.

Question	Finding	Conclusion / Recommendation
<p><b>a.</b> Is the Livelihoods Project relevant to international and national POLICIES &amp; PRIORITIES?</p>	<p>KI's Design Document (2013-2015) for the 2<sup>nd</sup> Joint Understanding on the Owen Stanley Ranges, Brown River Catchment and Kokoda Track Region focuses on <i>sustainable development and the protection of natural, cultural and historic values</i>. This document builds on the lessons learned from the 1<sup>st</sup> Joint Understanding and contributes directly to the:</p> <ul style="list-style-type: none"> <li>• UN's Millennium Development Goals;</li> <li>• PNG's Vision 2050 and Medium-term Development Goals;</li> <li>• PNG's NEC decision on the Brown River / Kokoda region.</li> </ul> <hr/> <p>KTA's Livelihood Project aims to <i>increase the capacity of Kokoda Track communities to generate income from tourism by adding value to the trekking experience</i>. This contributes directly to:</p> <ul style="list-style-type: none"> <li>• Goal 2 of the KI Design Document, namely: <i>Enhanced quality of life for landowners and communities through improved delivery of basic services, income generation and community development activities</i>. Annex 9.7 and 9.8 (pages 121-122) indicate that around 1% of KI's total expenditure during 2011-2013 was spent on income generation (i.e. Livelihoods Project) and around 21% on basic services (i.e. KDP).</li> <li>• Strategy 1 of KTA's Strategic Plan (2012 - 2015), namely: <i>Increase the benefits and opportunities for landowners and track based communities</i>.</li> </ul>	<p>Rural income generation along the Kokoda Track is relevant at international and national levels. Whilst the Livelihoods Project contributes directly to Goal 2 of the KI Design Document, during the period 2011-2013, only around 1% of KI expenditure went to income generation activities and another 21% went to the supply of basic services (mostly health and education) along the track through KDP (refer Annex 9.7 and 9.8, pages 121-122).</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Establish a Project Management Framework (refer Section 5.2.1) that (i) involves key international (e.g. DOTE) and national (e.g. DEC) stakeholders, and (ii) facilitates the design of an acceptable work programme and budget for income generation activities along the track.</li> </ul>



**Table 16:** Assessment of project relevance with reference to 6 questions (continued).

Question	Finding	Conclusion / Recommendation
<p><b>b.</b> Is the Project relevant to provincial POLICIES &amp; PRIORITIES?</p>	<ul style="list-style-type: none"> <li>Tako Gwae (Deputy Provincial Administrator, Oro Province Government) advised that annual funding support to KTA has been promised in recent years - but has yet to be released to KTA to support its works on the Track. The Oro Provincial Government is prepared to work closely with KTA in its future activities, including the Livelihoods project.</li> <li>Gei Raga (Deputy Provincial Administrator, Central Province Government) advised that the Central Province Government is keen on working with KTA to improve the livelihoods of the KT communities, and assist with infrastructure developments such as: (i) the road leading to the proposed Brown River hydro-power project, and (ii) airfare subsidies for locals to access markets for their agricultural produce. The administration is looking forward to the scoping study report findings for a sense of direction.</li> </ul>	<p>Rural income generation along the Kokoda Track is relevant at provincial, district and local levels. Sub-national government members and administration leaders have expressed a willingness to contribute to the project objective.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>Establish a Project Management Framework (refer Section 5.2.1) that (i) involves provincial, district and local level members and administrations, and (ii) facilitates the design of an acceptable work programme and budget for income generation activities along the track that complements existing policies, priorities and plans and budgets.</li> </ul>
<p><b>c.</b> Is the Project relevant to local level POLICIES &amp; PRIORITIES?</p>	<ul style="list-style-type: none"> <li>Peter Aimo (Member, Kairuku-Hiri District) has advised on national television that the Kairuku-Hiri District administration was keen to deliver infrastructure services including the road to the proposed Brown River hydro-power project to ease the current difficulties faced with accessibility to markets in Port Moresby.</li> <li>Ogi David (President, Koiari LLG) strongly requested KTA to play an actively role in strengthening income generation enterprises along the Track. Agriculture is recommended because it uses traditional knowledge and local potential. Appropriate and ample technical and financial support is also needed from relevant stakeholders including KTA to motivate and back the locals in this area.</li> <li>Jackson Iriro (President, Kokoda LLG) strongly suggested that KTA plans should be incorporated into the Kokoda LLG Plan. He emphasized that planning should not be done in isolation.</li> <li>In Oro Province, access to solar power was also raised as a priority issue for households along the track.</li> </ul>	

**Table 16:** Assessment of project relevance with reference to 6 questions (continued).

Question	Finding	Conclusion / Recommendation
<p><b>d.</b> Is the Project relevant to OTHER ORGANISATIONS that are working with KT communities?</p>	<p>Goal 2 of the KI Design Document, has 3 primary implementing partners, namely KDP (health and education), KTA (income generation) and DEC (payments for environmental services / benefit sharing).</p> <p>There are also other organizations working with communities along the track from the government (e.g. DSIP), non-government (e.g. KTF, Network Kokoda) and private sectors (e.g. tour companies).</p>	<p>Income generation is relevant to other organizations working along the track.</p> <p><u>Future livelihoods activities should:</u> establish a Project Management Framework (refer Section 5.2.1) that (i) strengthens collaboration between KTA, KDP and DEC, and (ii) coordinates activities with other organizations working on track</p>
<p><b>e.</b> Is the Project relevant to the PRIORITY NEEDS of KT communities?</p>	<p>The surveys found:</p> <ul style="list-style-type: none"> <li>• A strong need for income generation support along the Kokoda Track to complement the ongoing assistance from KDP (and other partners) in the areas of basic education and health. External support for income generation, education and health was clearly at the top of livelihoods priorities along the Kokoda Track.</li> <li>• KT communities (including CBMs) have limited understanding about the Livelihoods Project (e.g. no material has been seen outlining the project’s strategic and operational objectives and activities).</li> </ul>	<p>Income generation is relevant to communities along the track.</p> <p><u>Future livelihoods activities should</u> establish a Project Management Framework (refer Section 5.2.1) that ensures KT communities participate in project planning and monitoring activities, and have background information on the project to refer to (e.g. project brochure showing objective, outputs and activities).</p>
<p><b>f.</b> Is the Project relevant to the PRIORITY NEEDS of KT trekkers?</p>	<p>The study team met 2 groups of trekkers (one along the track and one in Port Moresby) who were interested to hear about the Livelihoods Project. They suggested the project:</p> <ul style="list-style-type: none"> <li>• Develop village products and services (e.g., fruit, fresh meat and eggs), museum, artwork/souvenirs, hats, bilums, hair braiding, clothes washing/drying);</li> <li>• Develop village stop-overs (1 or 2 days) where tourists could contribute their skills (e.g. school maintenance) and take part in village events/activities (e.g. play football);</li> <li>• Improve village toilets and showers (some better than others), but keep things as “original” as possible (e.g. solar lights not necessary). Guesthouses could charge extra for toilet paper and improved toilet and shower facilities.</li> </ul> <p>The tour operator survey form was emailed to 69 tour operators. Only 4 forms have been returned to-date which indicates a lack of support from tour operators. Completed forms indicated the Livelihoods Project could assist in the following areas:</p> <ul style="list-style-type: none"> <li>• Improve guest house design (e.g. step heights), village toilets, sleeping facilities, rubbish disposal, and washing &amp; drying facilities;</li> <li>• Develop fresh fruit &amp; vegetables, prepared food, craft markets, entertainment, site visits</li> </ul>	<p>Income generation is relevant to trekkers.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Establish a Project Management Framework (refer Section 5.2.1) that engages and involves tour operators in project planning, implementation and monitoring activities.</li> <li>• Select and research target tourism markets to better understand their requirements with regards to tourism products, services, prices and supply.</li> </ul>

## 4.2. Efficiency

*How efficiently the Livelihoods Project’s resources (physical and non-physical) are being converted into the desired outputs?*

**Table 17:** Assessment of project efficiency with reference to 5 questions (a-e).

Question	Finding	Conclusion / Recommendation
<p><b>a.</b> Does the Project have adequate HUMAN RESOURCES to implement each Annual Activity Plan and Budget?</p>	<p>The Livelihoods Project Officer was recruited in March 2012 (the previous Livelihoods Officer departed around one year earlier). Since that time he has been responsible for implementing 2 Annual Work Plans for the period 2011 to 2013; working with 22 CBMs. His job description includes planning, coordination, implementation, reporting and evaluation responsibilities, which implies this position is really the project’s “operational manager”.</p> <p>The Project Manager was recruited in March 2013. He is also responsible for KTA’s safety projects, and is therefore unable to contribute 50% of his time to the Livelihoods Project (as budgeted). This position therefore provides overall “project guidance” rather than part-time project management.</p> <p>CBMs are clearly not working to their full capacity. They need work plans to follow and report on, as well as training and support in the field.</p>	<p>Project efficiency has been limited by project management capacity in Port Moresby, as well as inadequate training and support for CBMs in the field.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Ensure project staff (including CBMs) have the necessary training and support to carry out their duties. The Project Manager needs to provide 50% of his time to the project. The Livelihoods Officer needs some project management training.</li> <li>• Recruit one Field Coordinator for each LLG (i.e. Koiari and Kokoda) to link CBMs with the Livelihoods Project Officer in Port Moresby (e.g. one based at Sogeri and one based at Kokoda Station).</li> </ul>
<p><b>b.</b> Does the Project have adequate PHYSICAL RESOURCES to implement each Annual Activity Plan and Budget?</p>	<p>The KTA office is well equipped with office equipment and communication facilities. There are 2 vehicles can be used for Livelihoods Project activities (e.g. collecting quotations, field trip materials, field trip transport; meetings with stakeholders).</p> <p>The Livelihoods Project Officer communicates with CBMs via KTA’s VHF radio (some need maintenance). However, the CBMs have no physical resources to help them with their planning, monitoring, training and awareness activities.</p>	<p>The project has adequate physical resources in Port Moresby, but very limited training and awareness resources for CBMs to use and share in the field.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Establish Community Resource Centres that provide physical resources for CBMs to use and share in the field (refer Section 5.2.2).</li> <li>• Provide CBMs with annual work plans to follow, monitor and report on, that clearly link activities to outputs and desired outcomes from year to year.</li> </ul>
<p><b>c.</b> Does the Project have adequate FINANCIAL RESOURCES to implement each Annual Activity Plan and Budget?</p>	<p>The Livelihoods Officer prepares annual work plans and budgets in consultation with DOTE in Canberra. Each plan is therefore designed to match the available budget. There is also a reserved activity budget-line for unbudgeted expenses with approval from Canberra.</p> <p>Activities are around 46% completed with 28% of funds (including reserves) remaining (refer Annex 9.8, page 122).</p>	<p>Overall, activities are around 46% completed with around 28% of funds (including reserves) remaining. This indicates activities are under budgeted (refer Annex 9.8 (page 122 for details).</p> <p><u>Future livelihoods activities should</u> provide the Livelihoods Officer with project management training.</p>

**Table 17:** Assessment of project efficiency with reference to 5 questions (continued).

Question	Finding	Conclusion / Recommendation
<p><b>d.</b> Does the Project have adequate SYSTEMS AND PROCEDURES in place to implement each Annual Activity Plan and Budget?</p>	<p>The Livelihoods Project Officer estimates around 20% of his time is spent on jobs that are not directly related to the project (e.g. standing in for front-desk staff, answering non-livelihoods queries). Considerable time is also spent on essential administrative tasks in Port Moresby (e.g. preparing ToRs and RFQs, collecting quotations, and collecting &amp; preparing reports). Vehicles are not always available which sometimes causes delays.</p> <p>Whilst the VHF radio provides an adequate link with the CBMs in the field (some in need of maintenance) and the CBM reporting/payment mechanism is working satisfactorily, there is also need for a clear work plan that links activities to outputs (that describe specific products) and outcomes from year to year for CBMs to follow and report on, together with follow-up support from Port Moresby.</p>	<p>The project has limited systems and procedures in place for keeping administrative workloads in Port Moresby to a minimum. Whilst the CBM reporting/payment system is generally simple and effective, the overall planning, monitoring and reporting framework needs improving.</p> <p><u>Future livelihoods activities</u> should:</p> <ul style="list-style-type: none"> <li>• Provide the Livelihoods Officer with some project management training;</li> <li>• Ensure project staff have access to the project vehicle as required (e.g. book in advance), and the Livelihoods Officer can focus on the project; rather than get distracted by other KTA tasks;</li> <li>• Follow a work plan that clearly links activities to outputs and outcomes from year to year;</li> <li>• Provide CBMs with clear annual work plans to follow and report on.</li> </ul>
<p><b>e.</b> Does the Project manage to IMPLEMENT each Annual Activity Plan using the available Budget?</p>	<p>Work Plan (2011-2012) progress (refer Annex 9.8 for budget details) is as follows:</p> <ul style="list-style-type: none"> <li>• <b>Activity 1:</b> KPI moved to 2012-2013 Activity 4 / 6% funds unspent;</li> <li>• <b>Activity 2:</b> KPI moved to 2012-2013 Activity 5 / 75% funds unspent;</li> <li>• <b>Activity 3:</b> 60% completed / 22% funds unspent (delayed by manufacturer);</li> <li>• <b>Activity 4:</b> 30% completed / 56% unspent (delayed by project management);</li> <li>• <b>Activity 5:</b> KPI moved to 2012-2013 Activity 4 / 19% funds unspent;</li> <li>• <b>Activity 9:</b> KPI moved to 2012-2013 Activity 4 / funded by TPI.</li> </ul> <p>Work Plan (2012-2013) progress (refer Annex 9.8 for budget details) is as follows:</p> <ul style="list-style-type: none"> <li>• <b>Activity 1:</b> Ongoing activity / 59% funds unspent;</li> <li>• <b>Activity 2:</b> 100% completed / 5% funds overspent (70% outstanding);</li> <li>• <b>Activity 3:</b> 38% completed / 71% funds overspent (delayed by manufacturer);</li> <li>• <b>Activity 4:</b> 38% completed / 52% funds unspent (delayed by trainee/trainer);</li> <li>• <b>Activity 5:</b> 10% completed / 74% unspent (delayed by project management).</li> </ul>	<p>The 2 Annual Work Plans are around 46% completed with 28% of budgeted funds unspent. Progress constraints relate to the human and physical resource limitations referred to above, as well as manufacturing delays, trainer/trainee availability and technical issues referred to in the next section.</p> <p><u>Future livelihoods work plans</u> should contain:</p> <ul style="list-style-type: none"> <li>• Around 2-4 outputs that describe specific products (not activities) that the project will deliver over a given period (e.g. 5 years) leading to the realization of the project objective and contribution to desired outcomes;</li> <li>• A standard numbering system that links activities to outputs from year to year.</li> </ul>

### 4.3. Effectiveness

*To what extent have the Livelihoods Project's planned outputs and objectives been achieved?*

**Table 18:** Assessment of project effectiveness with reference to 3 questions (a-c). **Note:** Activities and key performance indicators are sourced from the annual work plans

Question	Finding	Conclusion and Recommendations
<p><b>a.</b> Has each planned Output been delivered to Annual Activity Plan and Budget requirements (quantity, quality and time)?</p>	<p><b>Work Plan (2011-2012)</b></p> <p><b>Activity 1:</b> Skills Training (basic physiotherapy for feet, lower legs, neck and shoulders)</p> <p><b>Key performance indicator (KPI):</b> Basic physiotherapy service is available in at least 4 villages along the Kokoda Track by June 2012</p> <p><b>Finding:</b> In 2012, a contract was signed with Dr. Rob Gilfillan (Australia) to conduct basic physiotherapy trainings (in response to market research undertaken during the previous Livelihoods / Micro-business Support Project. In May 2012, 23 participants (men and women) from 7 villages in Central Province (Nauro 1 &amp; 2, Manari, Loni, Efogi, Kagi) attended a 5-day basic physiotherapy training at Efogi 1.</p>	<p>The project has delivered a 5-day basic physiotherapy training to 23 participants (men and women) from 7 villages in Central Province. However, there is no training report to refer to.</p> <p><b>Note:</b> The KPI has been transferred to 2012-2013 / Activity 4. Refer page 53 for information on refresher training and availability of basic physiotherapy services.</p>
	<p><b>Activity 2:</b> Community Based CBMs</p> <p><b>Key performance indicator (KPI):</b> 60% of CBMs are submitting their reports and performing as required.</p> <p><b>Finding:</b> In 2010, the Livelihoods / Micro-business Support Project selected 19 CBMs (14 men and 5 women) in Central Province and Oro Province and provided basic business management and financial management train-the-trainer sessions.</p>	<p>Start-up training has been given to 19 selected CBMs (14 men and 5 women) in Central Province and Oro Province through the previous Livelihoods / Micro-business Support Project.</p> <p><b>Note:</b> The KPI has been transferred to 2012-2013 / Activity 5. Refer page 54 for information on follow-up training and CBM performance.</p>
	<p><b>Activity 3:</b> Drying Room (Efogi)</p> <p><b>Key performance indicator (KPI):</b> A reliable clothes drying business is operating.</p> <p><b>Finding:</b> The drying room has been constructed at the elementary school at Efogi 1. A wood-fuelled drier has been manufactured by the Koki Vocational School in Port Moresby and delivered to a charter company at Jackson's airport in Port Moresby. However, to save charter costs the flight to Efogi is pending the arrival of the toilet seats and bases for Work Plan (2012-2013) / Activity 3 (page 51).</p>	<p>The drying room has the potential to provide an ongoing source of income for the elementary school at Efogi 1, as well as demonstrate the management of a village enterprise to school children and the village community. The KPI is around 60% complete.</p> <p><u>Future livelihoods activities</u> should ensure (i) the drier unit is delivered and installed as soon as possible and (ii) start-up training and monitoring be given to school board members / staff / students to ensure ongoing operation and maintenance of drying room enterprise.</p>

**Table 18:** Assessment of Livelihoods Project effectiveness with reference to 3 questions. **Note:** Activities and key performance indicators are sourced from the annual work plans

Question	Finding	Conclusion and Recommendations
<p>a. Has each planned Output been delivered to Annual Activity Plan and Budget requirements? (continued)</p>	<p><b>Activity 4:</b> Industry Skills Training</p> <p><b>Key performance indicators:</b> (i) 20 KTA Registered Tour Operators or their relevant appointed representatives receive training in book keeping; (ii) 20 more trained Porters &amp; Guides; (iii) 20 Trained Guest House Managers / Manageresses.</p> <p><b>Finding:</b></p> <ul style="list-style-type: none"> <li>• Basic financial management training sessions were conducted by Small Business Training and Consultants for local tour operators and registered guesthouse owners during the period December 2012 to January 2013 at 6 villages (Kokoda, Kovelolo, Alola, Efogi, Manari and Ioribaiva). The training report identifies 127 participants (mostly guesthouse owners with some other interested entrepreneurs); however minimal feed-back was given on these trainings from people interviewed along the track.</li> <li>• Industry skills training has not yet been carried out for (i) porters and guides, (ii) guesthouse managers and (iii) potential tour operators. There has been difficulty finding a trainer that matched the activity budget, so the KPI is around 30% complete.</li> </ul>	<p>Basic financial management training sessions have been given to 127 participants from 6 villages; however minimal feed-back was given on these trainings from people interviewed along the track. The KPI is around 30% complete (2 more training sessions due).</p>
	<p><b>Activity 5:</b> Milled Timber Project (Efogi and Kokoda)</p> <p><b>Key performance indicators:</b> (i) Two sawmills are in operation; (ii) Timber is being produced and sold for community and personal projects</p> <p><b>Finding:</b> Through their Community Development Program, STIHL (Port Moresby) have delivered:</p> <ul style="list-style-type: none"> <li>• 3 chainsaws and 1 mill and accessory equipment delivered to Efogi 1 for villages in the Koiari LLG (managed by Efogi village leaders and CBM).</li> <li>• 3 chainsaws and 1 mill and accessory equipment to Kokoda Station for villages in Kokoda LLG (managed by the CBM and KTA Chairman).</li> <li>• Delivered one 3-day training program at Efogi for the 6 chainsaw mill operators. The 3 Koiari LLG operators are from Efogi (other villages were invited) and the 3 from Kokoda LLG are from Kokoda , Kovelolo and Isurava.</li> </ul> <p>Sawmill operations were put on hold during the preparation of some Environmental Guidelines with DEC, so it was decided to budget for a refresher training for mill operators during Work Plan (2012-2013) pending the completion of the guidelines.</p>	<p>STIHL have delivered 2 chainsaw mills plus accessories together with start-up training for selected mill operators from Central and Oro Provinces. Mill operations were put on hold during the preparation of Environmental Guidelines with DEC, so it was decided to budget for a refresher training in Work Plan (2012-2013) pending the completion of the guidelines.</p> <p><b>Note:</b> The KPI has been transferred to 2012-2013 / Activity 4. Refer page 53 for Information on the sawmill operation, timber production and sales.</p>



**Table 18:** Assessment of Livelihoods Project effectiveness with reference to 3 questions. **Note:** Activities and key performance indicators are sourced from the annual work plans (continued).

Question	Finding	Conclusion and Recommendations
<p>a. Has each planned Output been delivered to Annual Activity Plan and Budget requirements? (continued)</p>	<p><b>Activity 9:</b> Guesthouse and Trekker Toilet Certification Training</p> <p><b>Key performance indicator (KPI):</b> Certification program is operational in time for the 2013 trekking season.</p> <p><b>Finding:</b> In early 2012, Eco Sustainability (Australia) conducted a 2-day training session (with reference to a training manual and measuring sticks), followed by site visits that informed guesthouse operators of any aspects of their property which either met or did not meet certification guidelines. In August 2012, a contract was signed with Dr. Rob Gilfillan (Australia) to provide annual guest house audits (3<sup>rd</sup> party) up to 30 June 2015 (dependent on continuing DOTE funding and activity continuation). During August to September 2012, about 60 guesthouse operators in Central and Oro Province took part in the 2012 audit.</p> <p>The 2012 Audit Report stated that:</p> <ul style="list-style-type: none"> <li>• The majority of guesthouse owners who participated in the initial training had returned to their properties and commenced some rebuilding and maintenance programs using the measuring sticks they had made during the training program. This was also confirmed during the scoping study with most operators visited able to produce their measuring stick and demonstrate improvements (e.g. table height).</li> <li>• The guarantee from KTA that owners whose properties passed the initial 2012 audit would receive a new toilet pot set had been actioned from Kokoda to as far as Abuari and Alola. However, the toilet sets for guesthouses from Owers' Corner to Templeton's 2 have not been delivered.</li> </ul> <p>This activity was administered and funded by TPA on behalf of KI during 2011-2012 and then transferred to the KTA during 2012-2013.</p>	<p>The guest house certification program is underway and the majority of the 60 participating guesthouse owners have made use of their 2-day training and guest house inspections (i.e. commenced some rebuilding and maintenance work on their properties using the measuring sticks they had made during the training program). However, the promised toilet pots have not been delivered to properties from Owers' Corner to Templeton's 2 that passed the initial 2012 audit.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• This activity was administered and funded by TPA on behalf of KI during 2011-2012 and then transferred to the KTA during 2012-2013.</li> <li>• The KPI has been transferred to 2012-2013 / Activity 4. Refer page 52 for Information on the delivery of the remaining toilet pot sets.</li> </ul>



**Table 18:** Assessment of Livelihoods Project effectiveness with reference to 3 questions (continued). **Note:** Activities and milestones are sourced from the annual work plans

Question	Finding	Conclusion and Recommendations
<p>a. Has each planned Output been delivered to Annual Activity Plan and Budget requirements? (continued)</p>	<p><b>Work Plan (2012-2013)</b></p>	
	<p><b>Activity 1:</b> Project management  <b>Milestones:</b> (i) Recruitment of Project Manager; (ii) Work plan agreed; (iii) Activities delivered; (iv) Progress and final reports delivered.  <b>Finding:</b> The current Livelihoods Project Officer was recruited in March 2012 to manage the Livelihoods Project with guidance from the KTA Project Manager (refer Refer Section 4.2a (page 46). Since then:</p> <ul style="list-style-type: none"> <li>• The Work Plan (2012-2013) was accepted by DOTE;</li> <li>• Progress reports have been submitted for April, May, July, September 2012 and February 2013;</li> <li>• The 2 Annual Work Plans are around 46% completed with 28% of budgeted funds unspent (refer Section 4.2e, page 47).</li> </ul>	<p>The 2 Annual Work Plans are around 46% completed with 28% of budgeted funds unspent. The Livelihoods Project needs to be strengthen its:</p> <ul style="list-style-type: none"> <li>• Human resource capacity (including CBMs);</li> <li>• Physical resources capacity in field;</li> <li>• Administrative procedures in Port Moresby.</li> </ul> <p><b>Note:</b> Refer Section 4.2 (page 46) for recommendations on improving project efficiency.</p>
	<p><b>Activity 2:</b> Scoping study review and recommendations for livelihoods project activities  <b>Milestones:</b> (i) TORs developed in consultation with DOTE by end of January 2013; (ii) Analysis of and recommendations for livelihoods program delivered by June 2013.  <b>Finding:</b> The scoping study contract was signed on 14 October 2013 with Pacific Island Projects (Rabaul), and the final Scoping Study Report submitted on 5 April 2014.</p>	<p>The final Scoping Study Report was submitted on 5 April 2014.</p>
<p><b>Activity 3:</b> Business Training and Improvements  <b>Milestones:</b> (i) Three training sessions delivered by March 2013 for guesthouse owners not already trained.  <b>Finding:</b> The 3 training sessions have not been delivered due to time constraints.</p>	<p>This activity has not started due to project management constraints, so the milestone is 0% complete.  <b>Note:</b> Refer Section 4.2d (page 47) for recommendations on improving efficiency.</p>	

**Table 18:** Assessment of Livelihoods Project effectiveness with reference to 3 questions (continued). **Note:** Activities and milestones are sourced from the annual work plans

Question	Finding	Conclusion and Recommendations
<p>a. Has each planned Output been delivered to Annual Activity Plan and Budget requirements? (continued)</p>	<p><b>Activity 3:</b> Business Training and Improvements (continued)</p> <p><b>Milestones:</b> (ii) Second guest house audit completed by May 2013; (iii) Delivered toilet pots by March 2013 (for those locations identified during guest house audit which did not receive toilet pots previously).</p> <p><b>Finding:</b> Dr. Rob Gilfillan (Australia) completed the 2<sup>nd</sup> guesthouse audit in March 2013, with 43 guesthouses (out of 60) being recommended for certification). The 2013 Audit Report stated that:</p> <ul style="list-style-type: none"> <li>• The vast majority of campsite owners had taken action on the recommendations made by the auditor during the 2012 audit visit.</li> <li>• The initial enthusiasm for the certification process had been maintained and in many cases increased.</li> <li>• The guarantee from KTA that guesthouse / camp site owners whose properties passed the initial 2012 audit would receive a new toilet pot set was positive. However, the delivery of around 22 toilet pots was still pending from Owers’ Corner to Templeton’s 2</li> </ul> <p>The survey found that:</p> <ul style="list-style-type: none"> <li>• Improvements had been made to the majority of guest houses visited using the measuring stick and training manual provided during the initial training.</li> <li>• Some guest house owners were unsure if tourists will pay more for better quality accommodation. Or will the improvements recommended by the guesthouse certification program be a waste of time and money?</li> <li>• The manufacturing of the remaining toilet seats by KK Kingston and toilet bases by Hardware house and Steel Industries was still pending due to technical delays.</li> <li>• KTA is in the process of appointing a certification panel to assess audit report and issue certificates. They are also discussing options for aligning the guesthouse certification programme with the TPA’s guesthouse accreditation programme.</li> </ul>	<p>The 2<sup>nd</sup> guesthouse audit has been successfully completed with 43 guesthouse / campsites being recommended for certification along the track. The remaining toilet pots still need to be manufactured and delivered as soon as possible, so the milestone and previous KPI is around 75% complete. The survey found that:</p> <ul style="list-style-type: none"> <li>• The Training Manual (Eco Sustainability) and measuring sticks provide useful tools for each guesthouse / campsite owner;</li> <li>• The Audit Report (Dr. Robert Gilfillan) provides a useful tool for project staff to monitor progress at each guesthouse (CBMs should be become more involved in this work).</li> </ul> <p><u>Future guesthouse certification activities</u> should:</p> <ul style="list-style-type: none"> <li>• Select and research target markets to better understand their requirements with regards to products services, prices (e.g. for certified operations) and supply.</li> <li>• Focus on matching supply with demand in order to increase guesthouse returns and long-term profitability (there is currently an over-supply of campsites and guesthouses). This may lead to a range of standards and prices (e.g. basic, standard and deluxe) for different markets (e.g. short distance trekkers and fly-in fly-out tourists who prefer to stay longer at one location).</li> <li>• Consider need to have 3<sup>rd</sup> party (i.e. independent) audits (e.g. Eco Sustainability could provide both training and audits with reference to their useful training tools).</li> <li>• Consider other options for manufacturing toilet pots (e.g. vocational centres or AT Projects in Goroka) with reference to cost, durability, maintenance, delivery.</li> </ul>

**Table 18:** Assessment of project effectiveness with reference to 3 questions (continued). **Note:** Activities and milestones are sourced from the annual work plans

Question	Finding	Conclusion and Recommendations
<p>a. Has each planned Output been delivered to Annual Activity Plan and Budget requirements? (continued)</p>	<p><b>Activity 4:</b> Technical Skills Training</p> <p><b>Milestones:</b> (i) Refresher training for milled timber project delivered by April 2013.</p> <p><b>Finding:</b> The Environmental Guidelines have been prepared with DEC outlining forest management and operational requirements. However, the PNG Forest Authority has advised the project should apply for a Timber Authority before operations can begin. A contract has also been signed with STIHL to provide the refresher training for the 6 selected mill operators. However, this activity has been delayed due to a death in the community, followed by trainer unavailability.</p>	<p>Refresher training, followed by sawmill operation, timber production and sales have been delayed due to the preparation of environmental guidelines, followed by trainer / trainee availability. The milestone and previous KPI are around 50% complete</p> <p><u>Future livelihoods activities</u> should:</p> <ul style="list-style-type: none"> <li>• Have a written agreement in place covering the specific responsibilities of KTA (e.g. follow-up training) and the local management (e.g. hiring out and maintenance) to ensure the ongoing understanding and support of 2 community groups.</li> <li>• Advise the PNG Forest Authority that both mill operations are for community use (i.e. not commercial) and will produce less than 500m<sup>3</sup> per annum. This means that there is no need to apply for a Timber Authority and operations can legally begin.</li> </ul>
	<p><b>Activity 4:</b> Technical Skills Training</p> <p><b>Milestones:</b> (ii) Refresher training for remedial treatment (basic physiotherapy) delivered by May 2013</p> <p><b>Finding:</b> In March 2013, 18 participants from Central Province (Efogi 1 &amp; 2) and 13 participants from Oro Province villages attended a 5-day refresher basic physiotherapy training session at Efogi conducted by the same trainer (free of charge). The survey found:</p> <ul style="list-style-type: none"> <li>• Most trainees are not yet confident to provide basic physiotherapy on their own and promote their services.</li> <li>• Two CBMs at Efogi (1 male and 1 female) were having some success. One has done around 300 basic physiotherapy treatments from his guest house, earning 30-50 Kina per trekker. The tour company he collaborates with is actively promoting this service.</li> <li>• There is also one basic physiotherapy centre established at Efogi 1 (not connected to project).</li> </ul>	<p>The 2 CBMs at Efogi have shown that a basic physiotherapy service has income generation potential and can be a good way to add value to a guesthouse or campsite. However, most trainees are not yet confident to provide basic physiotherapy on their own and promote their services. The previous KPI (services available in 4 villages) is 25% complete</p> <p><u>Future basic physiotherapy activities</u> should:</p> <ul style="list-style-type: none"> <li>• Identify interested CBMs who have received training;</li> <li>• Consult with target community representatives, tour operators and interested CBMs to work out how to promote and deliver basic physiotherapy services (e.g. build confidence);</li> <li>• Provide CBMs with follow-up support as necessary (e.g. refresher training);</li> <li>• Supply CBMs with the necessary training resources (e.g. CDs, booklets, basic physiotherapy tools);</li> <li>• Collect customer feed-back to improve basic physiotherapy services.</li> </ul>

**Table 18:** Assessment of project effectiveness with reference to 3 questions (continued). **Note:** Activities and milestones are sourced from the annual work plans

Question	Finding	Conclusion and Recommendations
<p>a. Has each planned Output been delivered to Annual Activity Plan and Budget requirements? (continued)</p>	<p><b>Activity 5:</b> Community Based CBMs</p> <p><b>Milestones:</b> (i) Delivered training to 60% of CBMs by June 2013 in Planning, roles &amp; core training, and Advanced training in: Reporting, Bookkeeping, Other (determined by CBM development needs); (ii) Provide in-field support to CBMs over activity period; (iii) Receiving regular and satisfactory reports from more than 70% of the CBMs.</p> <p><b>Finding:</b> The Livelihoods Project Officer keeps an up to-date record of reports received and payments made. About 60% of CBMs (currently 22) are paid each quarter. However, none of the planned CBM training activities have been undertaken due to time constraints. One or 2 field-support visit had been made by the Livelihoods Project Officer during the period (not including the scoping study).</p> <p>The survey found that the CBMs interviewed would be able to work more and perform better if KTA provided:</p> <ul style="list-style-type: none"> <li>• A work plan to follow and report on;</li> <li>• More start-up training in priority areas (e.g. business planning);</li> <li>• More follow-up visits;</li> <li>• More community awareness on the CBM program;</li> <li>• Training resources.</li> </ul>	<p>CBMs are critical to the successful implementation of project activities in the field. Unfortunately, the CBM capacity building KPI and milestones are around 10% complete. The survey found that:</p> <ul style="list-style-type: none"> <li>• Most CBMs are not working to their full potential due to limited: (i) work planning, (ii) start-up training, (iii) training resources, and (ii) follow-up training and support.</li> <li>• CBMs have the potential to provide cost-effective (being village based) information, communication and extension services that offer equity and continuity within their village area, as well as an independent (being paid by KTA), people-centred approach.</li> <li>• CBMs needed to be carefully selected for their (i) technical skills and expertise, (ii) availability, (iii) commitment, and (iv) standing within the community. Ideally, there should be 1 male and 1 female mentor in each location.</li> <li>• The reporting / payment mechanism would work better if there was a detailed work plan to measure progress against.</li> </ul> <p><u>Future livelihoods activities</u> should:</p> <ul style="list-style-type: none"> <li>• Consult with target community representatives and tour operators to identify priority training area(s) to start / continue with (not too many);</li> <li>• Provide the necessary mentor training in the priority areas, plus follow-up support as necessary (e.g. refresher training);</li> <li>• Supply the necessary training resources (e.g. CDs, booklets);</li> <li>• Promote the mentoring services within each target area;</li> <li>• Collect customer feed-back to improve tourism services.</li> </ul>
<p>b. Has each Project Partner made the expected contribution to the Project Activities and Outputs?</p>	<p>There are currently delays with the following suppliers:</p> <ul style="list-style-type: none"> <li>• STIHL (Port Moresby) for milled timber project refresher training</li> <li>• KK Kingston (Port Moresby) for the toilet seats for the guest house certification program;</li> <li>• Hardware House and Steel Industries (Port Moresby) for the toilet bases for the guest house certification program.</li> </ul>	<p>All the delays relate to either manufacturing or service delivery constraints.</p> <p><u>Future livelihoods activities</u> should consider alternative options for manufacturing toilet pots (e.g. local vocational centres or AT Projects in Goroka) with reference to cost, durability, maintenance and delivery.</p>

**Table 18:** Assessment of project effectiveness with reference to 3 questions (continued).

Question	Finding	Conclusion and Recommendations
<p>c. Has each Project Beneficiary made the expected contribution to the Project Activities and Outputs?</p>	<p>Project beneficiary contributions to Work Plan (2011-2012) are as follows:</p> <ul style="list-style-type: none"> <li>• <b>Activity 1:</b> Good participation in initial basic physiotherapy training;</li> <li>• <b>Activity 2:</b> Good participation in initial CBM training;</li> <li>• <b>Activity 3:</b> Good participation in construction of drying room</li> <li>• <b>Activity 4:</b> Not started;</li> <li>• <b>Activity 5:</b> Good participation in initial training for milled timber project by trainees;</li> <li>• <b>Activity 6:</b> Good participation in guest house certification program (1<sup>st</sup> audit).</li> </ul> <p>Project beneficiary contributions to Work Plan (2012-2013) is as follows:</p> <ul style="list-style-type: none"> <li>• <b>Activity 1:</b> Limited participation with project management due to limited field visits;</li> <li>• <b>Activity 2:</b> Moderate participation in scoping study due to limited support from most village councillors in Central Province;</li> <li>• <b>Activity 3:</b> Increased participation in guest house certification program (2<sup>nd</sup> audit);</li> <li>• <b>Activity 4:</b> Reduced participation in basic physiotherapy service delivery due to limited trainee confidence and follow-up support. Reduced participation in milled timber project due to delays preparing the Environmental Guidelines and trainer/trainee availability;</li> <li>• <b>Activity 5:</b> Limited CBM performance due to limited training and support services from Port Moresby.</li> </ul>	<p>The survey found that project beneficiaries are:</p> <ul style="list-style-type: none"> <li>• Willing to participate in income generation activities;</li> <li>• Becoming discouraged by implementation delays during 2012-2013.</li> </ul> <p><u>Future livelihoods activities</u> should establish a Project Management Framework (refer Section 5.2.1) that ensures KT communities and CBMs participate in project planning and monitoring activities, and have copies of the project’s objective and activities to refer to.</p>

#### 4.4. Impact

*Is the Livelihoods Project making a contribution towards its long-term development goal, as well as influencing the development approaches of other agencies?*

**Table 19:** Assessment of project impact with reference to 3 questions (a-c).

Question	Finding	Conclusion and Recommendations
<p><b>a.</b> Is the Project making an effective contribution towards planned outcomes for KT communities and trekkers?</p>	<p>The Livelihoods Project is contributing to:</p> <ul style="list-style-type: none"> <li>• Strategy 1 of KTA’s Strategic Plan (2012 - 2015), namely: <i>Increase the benefits and opportunities for landowners and track based communities;</i></li> <li>• Goal 2 of the KI Design Document, namely: <i>Enhanced quality of life for landowners and communities through improved delivery of basic services, income generation and community development activities.</i></li> </ul>	<p>The project is contributing to Strategy 1 of KTA’s Strategic Plan (2012 - 2015) and Goal 2 of the KI Design Document.</p> <p>Future livelihoods activities should:</p> <ul style="list-style-type: none"> <li>• Develop a monitoring framework that involves CBMs, community representatives and tour operators / trekkers;</li> <li>• Select a set of indicators (social, environmental and economic) to measure progress at the impact level.</li> </ul>
<p><b>b.</b> Is the Project influencing development policies and programs (local, provincial, national and international)?</p>	<p>The influence of the Livelihoods Project on other development programmes was not detected since the project only got underway in March 2012.</p>	<p>Too early to detect project influence.</p> <p>Future livelihoods activities should communicate regularly with key local, provincial, national and international stakeholders (e.g. annual reports).</p>
<p><b>c.</b> Is the Project having any unintended effects (positive and/or negative)?</p>	<p>The surveys identified a number of unintended and undesirable social changes that have accompanied the positive effects of tourism along the Kokoda Track over the last 10 years or so (refer Section 5.3.2, page 91 for details).</p>	<p>Too early to detect project impact.</p> <p>Future livelihoods activities should monitor and respond to cross-cutting issues (refer Section 5.3.2, page 91).</p>

## 4.5. Sustainability

Are the Livelihoods Project outputs likely to be used and/or developed after the implementation phase has been completed? What lessons have been learned to-date?

**Table 20:** Assessment of project sustainability with reference to questions (a).

Question	Finding	Conclusion and Recommendations
<p>a. Are Project Outputs likely to be sustained and replicated without donor support?</p>	<p>Sustainability with regards to Work Plan (2011-2012) is as follows:</p> <ul style="list-style-type: none"> <li>• <b>Activity 1:</b> Refer 2012-2013 / Activity 4;</li> <li>• <b>Activity 2:</b> Refer 2012-2013 / Activity 5;</li> <li>• <b>Activity 3:</b> The Efogi elementary school has moderate potential to operate and maintain the drying room enterprise (moderate input, moderate return to labour);</li> <li>• <b>Activity 4:</b> Not started;</li> <li>• <b>Activity 5:</b> Refer 2012-2013 / Activity 5;</li> <li>• <b>Activity 6:</b> Refer 2012-2013 / Activity 3.</li> </ul> <p>Sustainability with regards to Work Plan (2012-2013) is as follows:</p> <ul style="list-style-type: none"> <li>• <b>Activity 1:</b> Not applicable;</li> <li>• <b>Activity 2:</b> Not applicable;</li> <li>• <b>Activity 3:</b> The guest house certification programme requires the ongoing services of an external auditor. It is unlikely that guesthouse owners will be able / willing to cover these costs themselves, indicating the ongoing need for public or private sector support (e.g. TPA or KTA). The training and auditing inputs could be combined (assuming there is no market requirement for 3<sup>rd</sup> party audits).</li> <li>• <b>Activity 4:</b> Basic physiotherapy service entrepreneurs have good potential to operate and maintain their enterprises (low input, high return to labour). The 2 milled timber enterprises (high ongoing external and internal input) will always need good local management to ensure ongoing operation, maintenance and community support.</li> <li>• <b>Activity 5:</b> The CBM programme requires ongoing external support, indicating the ongoing need for public or private sector support (e.g. KTA).</li> </ul>	<p>Sustainability and potential for replication relates to output type. Low input, market driven enterprises with a reasonable return to labour (e.g. basic physiotherapy services) are most likely to be sustained and replicated. High external input operations (e.g. community sawmills) are less likely to be successful. Ongoing support is needed for CBM and guesthouse certification activities.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Select and research target markets to better understand their requirements with regards to products services, prices (e.g. for certified operations) and supply.</li> <li>• Focus on low external input, market driven tourism activities that (i) suit labour constraints, (ii) suit the physical location, and (iii) provide a reasonable return to labour (refer Section 5.1.1).</li> <li>• Establish suitable funding mechanism for guesthouse certification programme (e.g. through trekker/guesthouse levy and/or financial support from DSIP/KI. Funding could be managed by KTA or TPA as part of their guest house accreditation programme.</li> <li>• Establish suitable funding mechanism for CBM programme (e.g. through trekker levy and/or financial support from DSIP/KI. Funding could be managed by KTA or KDP through the proposed Community Resource Centres (refer Section 5.2.2).</li> </ul>



## 5. Livelihoods Project: *Future scope*

Future strategies for the Livelihoods Project were developed with reference to the livelihoods context (Section 3), the project review findings (Section 4), the stakeholder consultations, the available literature, and the 2<sup>nd</sup> study objective below comprising 10 specific deliverables (Annex 9.1, page 109):

- **To present KTA with a set of clear, feasible and empirical recommendations** (at the project design, delivery mechanism and activity levels) to enable delivery of a successful and sustainable livelihoods project that would bring services or benefits to local communities and/or trekkers.

The strategy selection work was carried out with reference to the 5 key factors that relate to livelihoods sustainable initiatives, namely:

- **Opportunities and threats:** How can the Livelihoods Project help local community groups to become more resilient to external threats, and take advantage of any relevant opportunities?
- **Strengths and weaknesses:** How can the Livelihoods Project help local community groups to build on their relevant strengths and address or avoid any critical weaknesses?
- **Supportive and limiting structures and processes:** How can the Livelihoods Project involve / support appropriate organizations (local and external), as well as recognize the various rules and procedures (government and community) that are in place?
- **Short and long-term strategies:** How can the Livelihoods Project help local community groups to make use of their available resources to realize their ...
- **Desired social, environmental and economic outcomes?**

Figure 86 shows how the 5 factors above relate to the Sustainable Livelihoods Framework.

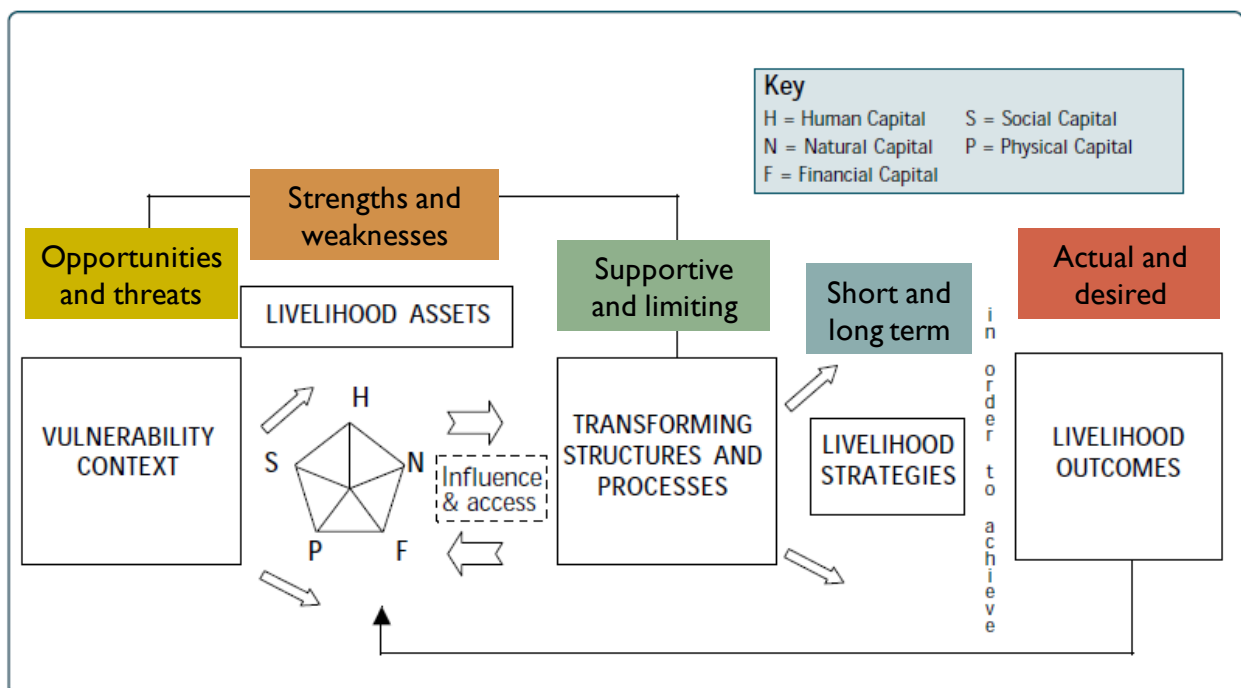


Figure 86: Sustainable Livelihoods Framework with 5 key factors added (sourced from DFID, 1996).

Figure 87 provides an overall analysis of the livelihoods context findings with reference to the Sustainable Livelihoods Framework (refer Figure 87, page 58). Scoring is used to facilitate the identification of potential “entry points” for future livelihoods activities (1=low potential; 5=high potential) with reference to the 3 site locations (i.e. Areas 1, 2, 3). Sections 5.1 to 5.3 (pages 60-92) introduce and discuss the 3 proposed entry points in more detail, namely: 3 Income Generation Markets, 4 Project Outputs and 3 Cross Cutting Issues.

LIVELIHOODS PROJECT CONTEXT		SURVEY FINDINGS			POTENTIAL 'ENTRY POINTS'
		1. SITES WITH ROAD ACCESS	2. SITES WITH AIRPORT ACCESS (but no road)	3. SITES WITH NO ROAD OR AIRPORT ACCESS	
OPPORTUNITIES	Trekker market	3	5	5	<b>Market 1:</b> Tourist products and services (Areas 1, 2, 3)
	District and Provincial markets	5	3	1	<b>Market 2:</b> Agricultural products (Area 1 and 2)
	Payments for environmental services	4	5	5	<b>Market 3:</b> Environmental services (Areas 1, 2, 3)
THREATS	Environmental issues	3	3	3	<b>X-cutting issue 1:</b> Climate change (Areas 1, 2, 3)
	Social issues	3	3	3	<b>X-cutting issue 2:</b> Social issues (Areas 1, 2, 3)
	Political issues	3	3	3	<b>X-cutting issue 3:</b> Political trends (Areas 1, 2, 3)
COMMUNITY STRENGTHS (high potential) AND WEAKNESSES (low potential)	Human resources	3	3	3	<b>Output 2:</b> Community resource centres (Areas 1, 2, 3)
	Natural resources	5	5	5	
	Financial resources	3	2	1	<b>Output 3:</b> Finance support services (Areas 1, 2, 3)
	Physical resources	5	3	2	<b>Output 4:</b> Transport support services (Area 2)
TRANSFORMING STRUCTURES AND PROCESSES	External structures	3	3	2	<b>Output 1:</b> Project management framework (Areas 1, 2, 3)
	External processes	3	3	2	
	Community structures	3	4	4	
	Community processes	3	4	4	
	LOW POTENTIAL	1	3	5	HIGH POTENTIAL

**Figure 87:** Analysis of survey findings and potential “entry points” for future livelihoods activities (1=low potential; 5=high potential).

## 5.1 Market Opportunities

*How can the Livelihoods Project help local community groups to take advantage of income generation opportunities?*

IFC (2007) promote the development of income generation opportunities that support and add value to existing tourism activities in PNG; contending that the diversification of local enterprises will strengthen local economies, create employment and potentially enhance food security and forest conservation. Market opportunities relate to economic conditions (i.e. external shocks, trends and seasonality), as well as:

- **Community assets / resources** that are available for people to use;
- **Structures and processes** that either support or limit people’s ability to use these resources;
- **Income generation strategies** for realizing people’s desired outcomes in the future.

Figure 87 (page 59) highlights 3 market opportunities which have potential to improve livelihoods along the Kokoda Track. These 3 potential “entry-points” for future livelihoods activities are introduced in the table below and considered in more detail in Sections 5.1.1 to 5.1.3 with reference to the Sustainable Livelihoods Framework (refer Figure 87, page 58) and selected assessment criteria.

**Table 21:** Potential market opportunities within Areas 1, 2 and 3

<b>Market Opportunity</b>	<b>Area 1 (road access) in Central and Oro Provinces</b>	<b>Area 2 (airport access) in Central Province</b>	<b>Area 3 (track access) in Central and Oro Provinces</b>
Tourism products and services Refer Section 5.1.1	<i>Moderate potential:</i> Whilst villages in Area 1 can supply tour guides, porters, tour companies and end-of-trek market sales (e.g. gifts), they have limited access to the majority of trekkers who prefer to stay along the central part of the track.	<i>High potential:</i> Village residents in Areas 2 and 3 are more dependent upon tourism as a livelihoods strategy than people living within Area 1. Fortunately, these areas are located in the central part of the track which has greater potential for tourism. Tourism opportunities generally increase with proximity to the track.	
	There is also potential to increase tourist numbers in all areas by targeting: (i) the trekker market in Japan (this approach could be modelled on the “conciliatory” trekker experience being promoted in Gallipoli), and (ii) the domestic market (e.g. short distance trekkers and fly-in fly-out tourists who prefer to stay longer at one central location).		
Agricultural products Refer Section 5.1.2	<i>High potential:</i> Villages in Area 1 have good connections to district and/or provincial markets and services, as well as productive soils and high land potential.	<i>Moderate potential:</i> Villages in Area 2 have intermittent and costly connections to district and/or provincial markets and services, as well as lower land potential due to environmental constraints such as poor soils, long dry season and steep slopes.	<i>Low potential:</i> Villages in Area 3 have difficult connections to both district and provincial markets and services, as well as lower land potential due to environmental constraints such as poor soils, long dry season and steep slopes.
Environmental services Refer Section 5.1.3	<i>Good potential:</i> The Kokoda Track area currently provides water catchment and conservation (biodiversity and heritage) services to the government and tourism sectors. Payment for these services is an option since there is a credible, ongoing threat of environmental degradation. Area 1 has some constraints relating to customary land alienation and forest degradation.		

### 5.1.1. Tourism

PNG has a very small share of the South Pacific arrivals market, and an even smaller share of the regional tourism market, with most visitors travelling for business rather than pleasure (TPA, 2006). PNG’s Tourism Master Plan (2006-2017) aims to increase the overall economic value of tourism to the nation through 5 focus areas, namely: marketing the destination, product development and investment, transport and infrastructure, human resource development, and institutions and industry partnerships.

Between 2001 and 2012, more than 30,000 trekkers (mostly from Australia) have walked the Kokoda Track. Trekker numbers grew from 76 in 2001 to over 5,621 in 2009. Since then numbers declined to 3,597 in 2012, due mainly to the global financial crisis and concerns about safety<sup>4</sup>. Most trekkers travel during the trekking season (April to October) accompanied by a tour operator. The 2 main reasons given for walking the Kokoda Track are to experience the challenging environment and to learn more about Australian history during World War 2 (Wearing et al., 2009). Chester (2012) estimates there are at least 87 campsites and guesthouses along the Kokoda Track, comprising around 900 guesthouse “beds” and 1,100 campsite “beds”. Assuming trekker numbers recover to around 5,000 per year, these figures indicate a substantial over supply of guest houses and camp sites along the track, and a need for local product development and market diversification. There is potential to increase tourist numbers by targeting the additional trekker market in Japan. A marketing approach could be modelled on the “conciliatory” trekker experience being promoted in Gallipoli. There is also potential to target the domestic market, such as short distance trekkers and fly-in fly-out tourists who prefer to stay longer at one central location (e.g. Port Moresby residents).

The study findings indicate that village residents in Areas 2 and 3 are more dependent upon tourism as a livelihoods strategy than people living within Area 1. Fortunately, both these areas are located in the central part of the track which has greater potential for tourism. In all areas, tourism opportunities were found to increase with proximity to the main track. Market opportunities relate to the different community assets / resources that are available for people to use. Table 22 presents the survey findings along the Kokoda Track with regards to:

- **Community strengths** for future tourism activities to build on;
- **Community weaknesses** for future tourism activities to either address or avoid.

**Table 22:** Community assets with conclusions and recommendations for future tourism activities

Community Assets	Survey Findings	Conclusion and Recommendations
Financial resources	<p><u>Financial strengths:</u></p> <ul style="list-style-type: none"> <li>• Tourism (including regular track maintenance and ward development grants) and market sales are the primary source of income along the track, together with cash cropping in Area 1. In all areas tourism opportunities were found to increase with proximity to the track.</li> <li>• Some guesthouse owners were able to save money, and a few had received (and repaid) loans for guesthouse improvements from tour operators and existing connections with credit services in Port Moresby.</li> </ul>	<p>Access to finance for tourism enterprises is limited (particularly in Areas 2 and 3). Some guest-house owners have demonstrated capacity to save and repay loans.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Select and research target markets to better understand their requirements with regards to products, services, prices and supply.</li> </ul>

<sup>4</sup> KI is currently addressing track maintenance and safety issues through KTA.

**Table 22:** Community assets with conclusions and recommendations for future tourism activities (continued)

Community Assets	Survey Findings	Conclusion and Recommendations
Financial resources (continued)	<p><u>Financial weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>In all areas, village residents have limited access to formal and informal credit services (particularly Areas 2 and 3).</li> <li>Some guesthouses and campsites have a reasonable occupancy rate, whilst others are performing poorly or not at all. Guesthouse and campsite fees (set by KTA) have not kept pace with inflation which makes it difficult to cover operational and maintenance costs.</li> <li>Some guesthouse owners are unsure if tourists will pay more for better quality accommodation. Will the improvements recommended by the guesthouse certification programme lead to higher returns? Will it help to be registered with the TPA's guesthouse accreditation programme?</li> </ul>	<p><u>Future livelihoods activities should (continued):</u></p> <ul style="list-style-type: none"> <li>Ensure fair prices are paid for tourist products and services (e.g. keep pace with inflation);</li> <li>Identify feasible market driven products and services that provide an alternative source of income to campsites and guesthouses (e.g. healthy food, laundry, cultural performances, handicrafts);</li> <li>Provide finance support for feasible tourism enterprises (refer Section 5.2.3).</li> </ul>
Human resources	<p><u>Human resource strengths:</u></p> <ul style="list-style-type: none"> <li>Landowners manage diverse natural resources that provide products and services for tourism markets (refer Natural Resources, page 63).</li> <li>Landowners can prepare healthy dishes from local food (e.g. yam cake, cassava cake, fried banana, banana cake, wild mushrooms with beans, purple yam, wild fowl eggs, okari nuts).</li> <li>Landowners are willing to learn new skills and develop new opportunities. They are also often prepared to work very hard to generate income (e.g. porters).</li> <li>One guesthouse operator now provides his guests with a popular basic physiotherapy service that provides an ongoing additional source of income.</li> <li>The CBM program has potential to provide a cost-effective extension service, although most CBMs are not working to their full potential.</li> <li>Work experience along the track is mostly restricted to the tourism sector (particularly in Areas 2 and 3).</li> </ul> <p><u>Human resource weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>Families are sometimes short of labour during the trekking season (e.g. when men are employed as porters). Women sometimes take on their husband's responsibilities.</li> <li>Some CBMs suggested English language training could build the confidence and capacity of landowners working with tourists (including porters and guides) to cater for their customer needs (including safety).</li> </ul>	<p>Human resource capacity to engage in the tourism sector is limited by (i) labour availability (particularly in Areas 2 and 3) and (ii) access to information, communication and extension services. Both men and women along the track have demonstrated potential and willingness to become successful tourism entrepreneurs.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>Select and research target markets to better understand their requirements with regards to products, services, prices and supply;</li> <li>Identify feasible market driven products and services that suit labour constraints (e.g. basic physiotherapy);</li> <li>Build capacity of CBMs to deliver priority information, communication and extension services along the track (refer Section 5.2.2);</li> <li>Establish Community Resource Centres that provide physical resources for CBMs to use and share in the field (refer Section 5.2.2).</li> </ul>

**Table 22:** Community assets with conclusions and recommendations for future tourism activities (continued)

Community Assets	Survey Findings	Conclusion and Recommendations
Natural resources	<p><u>Natural resource strengths:</u></p> <ul style="list-style-type: none"> <li>Area 1 has productive soils and high land potential for production of fresh fruit and vegetables. Land availability is an issue (refer Internal Structures and Processes, page 70).</li> <li>In Areas 2 and 3, landowners manage large areas of primary and secondary forest that provide tourism products (e.g. food, firewood, timber, roofing, materials for artwork and crafts) and services (e.g. clean water, biodiversity / heritage conservation), as well as small home gardens which include fruit (e.g. mandarins and pineapple).</li> <li>Landowners can prepare healthy dishes from local food (e.g. yam cake, cassava cake, fried banana, banana cake, wild mushrooms with beans, purple yam, steamed choko vines, wild fowl eggs and okari nuts).</li> </ul> <p><u>Natural resource weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>Areas 2 and 3 have lower land potential due to environmental constraints such as poor soils, long dry season and steep slopes. Labour inputs for agricultural activities are therefore higher than Area 1.</li> <li>Food security is a concern during extended dry periods. Some campsite and guesthouse owners secure their food and/or firewood supplies from neighbours to avoid depleting their family's limited resources. Others suggested establishing a central eating area where village residents could jointly cater for trekkers' eating needs.</li> <li>Protein is often in short supply for households and tourists (especially during trekking season when there is less time to go hunting/fishing).</li> </ul>	<p>Area 1 has productive soils and high land potential for production of fresh fruit and vegetables, although land availability is an issue. Landowners in Areas 2 and 3 manage large areas of primary and secondary forest that provide a range of tourism products and services. Some households also manage small home gardens. These resources have the potential to be degraded (refer Section 5.1.3). Food security is a concern during extended dry periods.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>Facilitate land-use planning activities (clan and family levels) that consider sustainable production systems for tourism products and services that are sometimes in short supply (e.g. production of firewood, fruit and poultry from integrated home gardens).</li> </ul>
Physical resources	<p><u>Physical resource strengths:</u></p> <ul style="list-style-type: none"> <li>There are 87 guesthouses/campsites participating well with KTA's guesthouse certification programme, with 43 operations in frequent use (Chester, 2013).</li> <li>Most villages have clean, piped water from a gravity fed systems (some in need of maintenance).</li> <li>Village VHF radios (some in need of maintenance) provide an essential communication link with KTA, tour operators and other external partners..</li> <li>Landowners in Area 2 often have access to third level airstrips which provide scheduled and/or charter flights to district and/or provincial markets.</li> </ul>	<p>Physical resources are generally adequate for the trekking industry. Tourism opportunities vary according to village location; rather than access to markets and services. There is an over-supply of guesthouses, campsites and porters.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>Select and research target trekker markets to better understand their requirements with regards to products, services, prices and supply.</li> <li>See next page</li> </ul>



**Table 22:** Community assets with conclusions and recommendations for future tourism activities (continued)

Community Assets	Survey Findings	Conclusion and Recommendations
Physical resources (continued)	<p><u>Physical resource weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>Overall, tourism opportunities increase with proximity to the main track; rather than proximity to transport infrastructure.</li> <li>Whilst Area 1 has limited access to the majority of trekkers who prefer to stay along the central part of the track, village residents are in a good position to provide end-of-trek sales (e.g. gifts and souvenirs).</li> </ul>	<p><u>Future livelihoods activities should (continued):</u></p> <ul style="list-style-type: none"> <li>Identify additional, feasible market driven products and services that (i) suit the physical location and (ii) provide a reasonable return to labour (e.g. end-of-trek gifts in Area 1).</li> </ul>

Market opportunities also relate to transforming structures and processes (internal and external). Table 23 presents the survey findings along the Kokoda Track with regards to:

- **Supportive factors** that enhance the ability of tourism enterprises to use available resources;
- **Limiting factors** that restrict the ability of tourism enterprises to use their available resources.

**Table 23:** Transforming structures and processes with conclusions and recommendations for future tourism activities

Structures & Processes	Findings	Conclusion and Recommendations
External structures and processes	<p><u>Supportive structures and processes:</u></p> <ul style="list-style-type: none"> <li>KTA’s Commercial Operators Licence Handbook (2012) outlines both KTA and tour operator responsibilities. KTA rangers monitor operations along the track.</li> <li>KTA’s ward development grants and track maintenance payments provide a regular source of community income along the track.</li> <li>KTA’s CBM network provides the only field-based tourism extension service along the track. However, most CBMs are not working to their full potential.</li> <li>KTA’s Livelihoods Project has recruited external specialists to assist with guesthouse certification and provision of basic physiotherapy services. The project has also provided basic financial management training sessions at 6 villages and is establishing a drying room enterprise at Efogi.</li> <li>Various agencies have supported village water supply systems (e.g. War Graves Memorial, Rotary International and Strongim Pipol Strongim Nesen program).</li> <li>KTF has provided women’s training courses on village baking.</li> <li>TPA has provided some tour guide trainings.</li> <li>Some tour operators have provided financial support to their target guesthouses.</li> <li>Some guesthouses have not registered with the Investment Promotion Authority.</li> </ul>	<p>There is limited coordination amongst the different tourism stakeholders operating along the track. KTA’s CBM network provides the only field-based extension service for tourism entrepreneurs. KTA’s Commercial Operators Licence Handbook (2012) requirements are not always followed.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>Ensure KTA regulations support local tourism enterprises (e.g. rates set for guesthouses and porters should keep pace with inflation);</li> <li>Ensure KTA enforces the Commercial Operators Licence Handbook (2012) regulations (e.g. maximum load limit and return flight or equivalent in cash);</li> <li>Establish a management framework that (i) improves the coordination and delivery of tourism activities and (ii) maximizes the existing CBM network (refer Section 5.2.1, page 77).</li> </ul>



**Table 23:** Transforming structures and processes with conclusions and recommendations for future tourism activities

Structures & Processes	Findings	Conclusion and Recommendations
External structures and processes (continued)	<p><u>Limiting structures and processes:</u></p> <ul style="list-style-type: none"> <li>Porters and guides are concerned the KTA Commercial Operators Licence Handbook (2012) requirements are often ignored (e.g. maximum load limit and return flight or equivalent in cash).</li> <li>Porters and guides are concerned their daily rate (KTA set the minimum rate) does not keep pace with inflation. Some suggested a fixed daily rate to avoid jealousy and misunderstanding. Many are also concerned that they are not covered by medical / evacuation insurance (unlike trekkers).</li> <li>PNG tour guides and porters recruited from other districts and provinces are less popular since they replace local jobs. External tour guides sometimes discourage their group members from purchasing local food (e.g. fresh fruit) from market stalls, leaving women standing with a stall full of local fruit.</li> </ul>	<ul style="list-style-type: none"> <li>See previous page</li> </ul>
Internal structures and processes	<p><u>Supportive structures and processes:</u></p> <ul style="list-style-type: none"> <li>There are 4 key internal structures which have the potential to support tourism activities along the track, namely: (i) clan groups, (ii) ward development committees, (iii) local church organizations and (iv) CBMs.</li> <li>The CBM network provides the only field-based extension service for tourism enterprises along the Kokoda Track. However, most CBMs are not working to their full potential.</li> </ul> <p><u>Limiting structures and processes:</u></p> <ul style="list-style-type: none"> <li>Community ownership and responsibility are becoming important issues for landowners along the track. Some suggested KTA should assist landowners to establish a landowner company that looks after community affairs and livelihoods using revenue from trekking.</li> <li>Some guesthouse owners recommended their community coordinate tourism activities within the village. This would help the community to allocate limited resources (e.g. food and fuel wood), and also address other issues, such as take steps to ensure school children attend school; rather than work as porters.</li> <li>There is a general concern that tour companies and trekkers are benefitting more from tourism than the landowners. Some guesthouse owners are looking at ways to get round this issue (e.g. forming partnerships with tour operators).</li> </ul>	<p>Local structures and social networks have limited involvement with tourism income generation activities along the track. Most CBMs are not working to their full potential.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>Establish a management framework that (i) engages local structures and decision-making processes and (ii) enhances community ownership and responsibility for tourism income generation activities along the track (refer Section 5.2.1).</li> </ul>

Table 24 uses scoring to facilitate the identification of feasible options for tourism products and services along the Kokoda Track (1=low potential; 5=high potential) with reference to:

- **Current strategies** for realizing income generation objectives along Kokoda Track;
- **Proposed strategies** for future income generation activities along Kokoda Track.

**Table 24:** Assessment of income generation strategies for tourism enterprises (1=low potential; 5=high potential)

Tourism opportunities	Area	Start-up potential (low input)	Operational potential (low input)	Value adding potential	Return to labour potential	Likelihood of success & replication	AVERAGE SCORE (priority)
Local guides and porters (over-supply)	1,2,3	5	5	2	2	2	3
Local camp sites and guest houses (over-supply)	2,3	3	3	3	3	2	3
Additional local products and services	1,2,3	5	5	5	5	4	5
Local tour operators	1,2,3	1	2	5	5	3	3



### Options for tourism products and services

- **Option 1 (high potential)** relates to the supply of additional local products and services that complement the services offered by local campsites and guesthouses. Future livelihoods activities should focus on low input, market driven options that suit local labour and environmental constraints, and provide a reasonable and sustainable return to labour for village residents (including women, youth and elderly). Strategies for Area 1 include the supply of local artefacts and gifts within a market setting for tourists, guides and porters at the end of their trek. Strategies for Areas 2 and 3 include the development of integrated home gardens that supply fresh fruit, vegetables and protein, together with complementary services that add value to guesthouse operations such as healthy meals, basic physiotherapy, hair-braiding and laundry.
- **Option 2 (good potential)** relates to the establishment of demonstration local tour companies that offer a competitive alternative to existing operations from overseas. Tour operator enterprises require significant inputs during both start-up (e.g. equipment and training) and operational (e.g. equipment and travel) phases which could be offset through a partnership arrangement with an overseas tour company or an existing business in Port Moresby.
- **Option 3 (moderate potential)** relates to strengthening campsite and guesthouse operations in Areas 2 and 3 that are accredited under the guesthouse certification programme. Future livelihoods activities should focus on matching supply with demand in order to increase guesthouse returns and long-term profitability (there is currently an over-supply of campsites and guesthouses). This may lead to a range of standards and prices (e.g. basic, standard and deluxe) for different markets (e.g. short distance trekkers and fly-in fly-out tourists).
- **Option 3 (moderate potential)** relates to the supply of local tour guides and porters that offer a competitive alternative to external labour (currently an over-supply of tour guides and porters). Future livelihoods activities should focus on building local capacity to perform demand driven services (e.g. English language training), as well as ensuring fair employment conditions for all.

### 5.1.2. Agriculture

Agriculture is the most important livelihoods strategy for most Papua New Guineans. Subsistence agriculture provides around 83% of the nation’s carbohydrate intake and 76% of its protein intake. Cash cropping provide many families with an essential source of cash income through the formal and informal sectors of the economy (Bourke and Harwood, 2009). PNG’s National Agricultural Development Plan (2006-2017) aims to enhance and improve the quality of life for over 87% of the rural population; through increased productivity, sustainable and quality production coupled with integrated planning and environmentally sustainable management.

The study findings indicate that subsistence agriculture is an essential livelihoods strategy for most people living along the Kokoda Track. This includes gardening, fishing/hunting, collecting firewood for cooking, and timber and bush materials for shelter. The sale of fresh fruit, vegetables and nuts to local trekkers as well as district and/or provincial markets provides an important source of village income in Areas 1, 2 and 3 particularly during the non-trekking season (November to March). Cash cropping provides an additional source of income for people living within Area 1. Market opportunities relate to the different community assets / resources that are available for people to use. Table 25 presents the survey findings along the Kokoda Track with regards to:

- **Community strengths** for future agricultural activities to build on;
- **Community weaknesses** for future agricultural activities to either address or avoid.

**Table 25:** Community assets with conclusions and recommendations for future agricultural activities

Community Assets	Survey Findings	Conclusion and Recommendations
Financial resources	<p><u>Financial strengths:</u></p> <ul style="list-style-type: none"> <li>• The sale of fresh fruit, vegetables, nuts, bilums and baskets to local trekkers as well as district and/or provincial markets provides an important source of village income in Areas 1, 2 and 3 particularly during the non-trekking season (November to March).</li> <li>• Cash cropping provides an additional source of income for people living within Area 1.</li> </ul> <p><u>Financial weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>• In all areas, village residents have limited access to formal and informal credit services (particularly Areas 2 and 3).</li> </ul>	<p>Access to finance for agricultural enterprises is limited (particularly in Areas 2 and 3).</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Select and research target trekker, district and provincial markets to better understand customer requirements with regards to agricultural products, prices and supply.</li> <li>• Provide finance support for feasible agricultural enterprises (refer Section 5.2.3)</li> </ul>
Human resources	<p><u>Human resource strengths:</u></p> <ul style="list-style-type: none"> <li>• Subsistence agriculture is an essential livelihoods strategy for most people living along the Kokoda Track. This includes gardening, fishing/hunting, collecting firewood for cooking, and timber and bush materials for shelter.</li> <li>• Cash cropping is practiced in Area 1 and was practiced in Area 2 (e.g. coffee and mandarins in Central Province).</li> </ul>	<p>Human resource capacity and willingness to engage in the agricultural sector is high, although limited by (i) labour availability (particularly in Areas 2 and 3) and (ii) inadequate information, communication and extension services.</p> <p>See next page</p>

**Table 25:** Community assets with conclusions and recommendations for future agricultural activities (continued)

Community Assets	Survey Findings	Conclusion and Recommendations
Human resources	<p><u>Human resource strengths (continued):</u></p> <ul style="list-style-type: none"> <li>• A few households are / have been engaged in livestock activities (e.g. fish ponds and poultry).</li> <li>• Landowners can prepare healthy dishes for visiting tourists from local food (e.g. yam cake, cassava cake, fried banana, wild mushrooms with beans, purple yam, wild fowl eggs, steamed choko vines and okari nuts).</li> <li>• Landowners are willing to learn new skills and develop new opportunities. They are also often prepared to work very hard to generate income (e.g. porters).</li> <li>• The CBM program has potential to provide a cost-effective extension service, although currently no support is given to agricultural activities.</li> </ul> <p><u>Human resource weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>• Formal work experience in the agricultural sector is mostly limited to Area 1.</li> <li>• Tourism activities require significant labour inputs (particularly portering) making less time available for other activities (including subsistence agriculture and cash cropping).</li> </ul>	<p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Select and research target trekker, district and provincial markets to better understand customer requirements with regards to agricultural products, prices and supply.</li> <li>• Identify feasible market driven products and agricultural systems that (i) suit labour constraints and (ii) provide a reasonable return to labour (e.g. healthy meals from local gardens)</li> <li>• Build capacity of CBM network to deliver priority information, communication and extension services along the track (refer Section 5.2.2)</li> </ul>
Natural resources	<p><u>Natural resource strengths:</u></p> <ul style="list-style-type: none"> <li>• Area 1 has generally high agricultural potential with good market access. These villages are generally less attractive to tourists being situated at either end of the track. Land availability is an issue (refer Internal Structures and Processes, page 70).</li> <li>• Landowners in Areas 2 and 3 manage large areas of primary and secondary forest that provide agricultural products (e.g. fruit, vegetables, nuts, firewood and protein), as well as small home gardens which include fruit (e.g. mandarins and pineapple).</li> </ul> <p><u>Natural resource weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>• Areas 2 and 3 have lower agricultural potential due to environmental constraints such as poor soils, long dry season and steep slopes. Labour inputs for agricultural activities are therefore higher than Area 1.</li> <li>• Areas 2 and 3 also have significant non-trekker market access constraints. There is evidence of previous cash cropping activities (mandarin and coffee) in areas 2 and 3 of Central Province which are currently neglected due to high transport costs.</li> </ul>	<p>Area 1 has productive soils and high land potential, although land availability is an issue. Landowners in Areas 2 and 3 manage large areas of primary and secondary forest that provide a range of agricultural products. Some households also manage small home gardens. These resources have the potential to be degraded (refer Section 5.1.3). Food security is a concern during extended dry periods.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Select and research target trekker, district and provincial markets to better understand customer requirements with regards to agricultural products, prices and supply;</li> <li>• See next page</li> </ul>

**Table 25:** Community assets with conclusions and recommendations for future agricultural activities (continued)

Community Assets	Survey Findings	Conclusion and Recommendations
Natural resources (continued)	<p><u>Natural resource weaknesses / concerns (continued):</u></p> <ul style="list-style-type: none"> <li>• Food security is a concern during extended dry periods. Some campsite and guest house owners secure their food and/or firewood supplies from neighbours to avoid depleting their family’s limited resources. Others suggested establishing a central eating area where village residents could jointly cater for trekkers’ eating needs.</li> <li>• Families are sometimes short of labour during the trekking season (e.g. when men are employed as porters). On these occasions, women may have to take on their husband’s responsibilities.</li> <li>• Protein is often in short supply for households and tourists (especially during the trekking season when there is less time to go hunting / fishing). Therefore, low-input options that are close to the house are popular (e.g. fish ponds, poultry, integrated home gardens).</li> </ul>	<p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Facilitate land-use planning activities (clan and family levels) that consider sustainable production systems for agricultural products that are sometimes in short supply (e.g. firewood, food and protein);</li> <li>• Identify feasible low external input options for supplying agricultural products that suit (i) labour constraints, (ii) environmental constraints and (iii) provide a reasonable return to labour (e.g. production of firewood, fruit and poultry from integrated home gardens).</li> </ul>
Physical resources	<p><u>Physical resource strengths:</u></p> <ul style="list-style-type: none"> <li>• Most villages have clean, piped water from a gravity fed systems (some in need of maintenance).</li> <li>• Village VHF radios (some in need of maintenance) provide an essential communication link with KTA, tour operators and other external partners.</li> <li>• Landowners in Area 1 have road access to district and/or provincial markets and services.</li> <li>• Landowners in Area 2 often have access to third level airstrips which provide scheduled and/or charter flights to district and/or provincial markets.</li> </ul> <p><u>Physical resource weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>• Many Area 2 residents are keen to negotiate airfare subsidies to facilitate the sale of agricultural products to district and/or provincial markets.</li> <li>• Some residents in Kokoda LLG suggested the project establish a cool storage shelter / processing facility for vegetables at Kokoda Station , and open up market access for village people.</li> </ul>	<p>Physical resources are generally adequate for the sale of agricultural products to (i) tourists in Areas 1, 2 and 3, and (ii) district/ provincial markets in Area 1.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Select and research target tourist, district and/or provincial markets to better understand customer requirements with regards to agricultural products, prices and supply;</li> <li>• Identify feasible options for supplying agricultural products to provincial markets that suit (i) labour constraints, (ii) environmental constraints and (iii) provide a reasonable return to labour (e.g. fresh fruit and vegetables to retail outlets in Port Moresby);</li> <li>• Provide transport support for feasible demonstration enterprises in Area 2 (refer Section 5.2.4).</li> </ul>

Market opportunities also relate to transforming structures and processes (internal and external). Table 26 presents the survey findings along the Kokoda Track with regards to:

- **Supportive factors** that can enhance the ability of agricultural enterprises to use available resources;
- **Limiting factors** that can restrict the ability of agricultural enterprises to use available resources.

**Table 26:** Transforming structures and processes with conclusions and recommendations for future agricultural activities

Structures & Processes	Findings	Conclusion and Recommendations
External structures and processes	<p><u>Supportive structures and processes:</u></p> <ul style="list-style-type: none"> <li>• Network Kokoda is keen to assist with agricultural training and support for low-input, market driven crops that provide a reasonable return to labour (e.g. chilli pepper and cardamom);</li> <li>• NARI’s outreach and liaison program provides Information resources at Laloki, and assists interested communities upon request to establish local multiplication centres/nurseries. They have also established some vegetable farming research plots in Area 1 of Central Province.</li> </ul> <p><u>Limiting structures and processes:</u></p> <ul style="list-style-type: none"> <li>• The evaluation of the previous Micro-business Support Project’s agricultural enterprise trials identified the following limitations: (i) inadequate involvement of target communities in business planning, (ii) inadequate training in business operations and (iii) unclear project agreements. NARI also indicated that their ability to transfer appropriate skills and knowledge was limited by funding and time constraints.</li> <li>• KTA manages the CBM network which provides the only field-based tourism extension service along the Kokoda Track. However, the CBM network does not currently support agricultural activities.</li> </ul>	<p>There is limited coordination amongst the different agricultural agencies operating along the Kokoda Track. KTA’s CBM network provides the only field-based extension service (currently limited to tourism) along the Kokoda Track.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Establish a management framework that (i) improves the coordination and delivery of agricultural research and development activities along the track and (ii) maximizes the existing CBM network (refer Section 5.2.1).</li> </ul>
Internal structures and processes	<p><u>Supportive structures and processes:</u></p> <ul style="list-style-type: none"> <li>• There are 4 key internal structures which have the potential to support agricultural activities along the track, namely: (i) clan groups, (ii) ward development committees, (iii) local church organizations and (iv) CBMs.</li> <li>• The CBM network does not currently support agricultural activities.</li> </ul> <p><u>Limiting structures and processes:</u></p> <ul style="list-style-type: none"> <li>• In Area 1, some portions of customary land have been alienated by the state (mostly for agricultural developments). This situation has led to a more “cosmopolitan” arrangement with settlers moving in from other areas.</li> <li>• Some village residents recommended the project support easy to manage projects that can be sustained (e.g. fish ponds).</li> </ul>	<p>Local level structures and social networks have limited involvement with agricultural activities along the track. The CBM network does not provide agricultural extension services.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Establish a management framework that (i) engages local structures and decision-making processes and (ii) enhances community ownership and responsibility for agricultural income generation activities along the track (refer Section 5.2.1)</li> </ul>



Table 27 uses scoring to facilitate the identification of options for future agricultural enterprises along the Kokoda Track (1=low potential; 5=high potential) with reference to:

- **Current agricultural strategies** for realizing income generation objectives along Kokoda Track;
- **Proposed agricultural strategies** for future income generation activities along Kokoda Track.

**Table 27:** Assessment of income generation opportunities in agricultural sector (1=low potential; 5=high potential)

Agricultural options	Area	Start-up potential (low input)	Operational potential (low input)	Value adding potential	Return to labour potential	Likelihood of success & replication	AVERAGE SCORE (priority)
Fruit and vegetables for tour operators and trekkers	1,2,3	3	4	4	4	4	4
Fruit and vegetables for district and/or provincial markets	1	3	3	3	3	3	3
Cash crops for district and/or provincial markets	1	3	3	3	3	3	3
Cash crops, fruit and vegetables for district and/or provincial markets	2	2	2	2	2	2	2
Protein for tour operators and trekkers	1,2,3	3	4	4	4	4	4
Protein for district and/or provincial markets	1	3	3	4	3	3	3



### Options for agricultural products

- **Option 1 (good potential)** relates to the sale of fresh fruit, vegetables, protein and prepared food from Areas 1, 2 and 3 to tour operators and trekkers. These enterprises complement the services offered by local campsites and guesthouses; focusing on low input, market driven options that suit local labour and environmental constraints, and provide a reasonable and sustainable return to labour for village residents (including women, youth and elderly). Strategies include the development of integrated home gardens that supply fresh fruit, vegetables and protein close at hand; adding value where possible by cooking meals, preparing fruit etc.
- **Option 2 (moderate potential)** relates to the sale of fresh fruit, vegetables, cash crops and protein from Area 1 to district and/or provincial markets. In Area 1 of Central Province, Network Kokoda is assisting communities with agricultural training and extension for low-input, market driven crops that provide a reasonable return to labour, and the National Agricultural Research Institute has established some vegetable farming research plots.
- **Option 3 (quite poor potential)** relates to the sale of cash crops, fruit and vegetables from Area 2 to Port Moresby markets. Potential for these enterprises could be increased with the provision of transport support services for feasible enterprises (refer Section 5.2.4).



### 5.1.3. Environmental Services

Payments for Environmental Services (PES) promote the protection of natural resources in the market place. The PES approach offers landowners an incentive to manage their natural resources for the supply of an environmental service, such as watershed protection, biodiversity conservation and climate change mitigation through carbon sequestration. PES markets include the direct beneficiaries of an environmental service (e.g. hydro-power companies) or a third party (e.g. provincial or national government) (IIED, 2013). Wunder (2005) concludes that PES schemes will need to demonstrate additionality with reference to baseline data which means “people facing credible but medium-sized environmental degradation are more likely to become PES recipients than those living in relative harmony with Nature”.

The study findings indicate that there is minimal understanding along the Kokoda Track about Goal 3 of the KI Design Document, namely: “the wise use and conservation of the catchment protection area, including the Kokoda Track and its natural and cultural resources and values”, accompanied by a common view that the track benefits tour operators and trekkers more than landowners. Market opportunities relate to the different community assets / resources that are available for people to use. Table 28 presents the survey findings along the Kokoda Track with regards to:

- **Community strengths** for environmental service activities to build on;
- **Community weaknesses** for environmental service activities to address or avoid.

**Table 28:** Community assets with conclusions and recommendations for future environmental protection activities

Community Assets	Survey Findings	Conclusion and Recommendations
Financial resources	<p><u>Financial strengths:</u></p> <ul style="list-style-type: none"> <li>• No payments have been made to date for environmental services along the track.</li> </ul> <p><u>Financial weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>• In all areas, village residents have limited access to formal and informal credit services (particularly Areas 2 and 3).</li> </ul>	<p>Access to finance for PES is limited.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Select and research potential PES markets and assess feasibility with regards to financial resource requirements.</li> </ul>
Human resources	<p><u>Human resource strengths:</u></p> <ul style="list-style-type: none"> <li>• Landowners along the Kokoda Track are generally willing and able to protect their natural resources for multiple benefits. The PES approach offers landowners an incentive to manage their natural resources for the supply of an environmental service.</li> <li>• Landowners are willing to learn new skills and develop new opportunities. They are also often prepared to work very hard to generate income (e.g. porters).</li> <li>• The CBM program has potential to provide a cost-effective extension service, although currently little support is given to natural resource management activities.</li> </ul>	<p>Human resource capacity to manage their natural resources is high, although external support is needed with regards to (i) raising community awareness and understanding about PES, (ii) initial community organization, (iii) social mapping and baseline data collection, (iv) ongoing monitoring, verification and reporting.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Select and research potential PES markets and assess feasibility with regards to human resource requirements<sup>5</sup>.</li> </ul>

<sup>5</sup> The PNG Forest Authority is developing a land ownership mapping and forest resource assessment system that supports community forest management schemes (including PES and REDD+) and increases landowner understanding about the goods and services that forests provide.

**Table 28:** Community assets with conclusions and recommendations for future environmental service activities (continued)

Community Assets	Survey Findings	Conclusion and Recommendations
Human resources (continued)	<p><u>Human resource weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>There is minimal understanding along the Kokoda Track about Goal 3 of the KI Design Document, namely: “the wise use and conservation of the catchment protection area, including the Kokoda Track and its natural and cultural resources and values”, accompanied by a common view that the track benefits tour operators and trekkers more than landowners.</li> </ul>	See previous page
Natural resources	<p><u>Natural resource strengths:</u></p> <ul style="list-style-type: none"> <li>In Areas 1 and 2, landowners manage large areas of primary and secondary forest that provide a range of environmental products (e.g. food, fuel, timber and protein) and environmental services (e.g. clean water and forest biodiversity / heritage conservation).</li> </ul> <p><u>Natural resource weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>IFC (2007) reports “There is increasing pressure both along the Track itself and in the adjacent area from actual and potential development projects relating to oil palm, mining and the forestry sectors. In addition, small scale community gardens continue to impact upon the Track, whilst the impacts of increasing tourist numbers include an increase in waste and sanitation problems and an increase in the physical degradation of the Track and surrounding bush from camping and trekking activities. Development pressure on the Track will increase as communities seek to generate income from their land and basic social services and infrastructure continue to decline”.</li> </ul>	<p>Landowners in Areas 1 and 2, manage large areas of primary and secondary forest that provide environmental services to (i) Provincial markets in Port Moresby and Popondetta (e.g. clean water), as well as (ii) Tour operator and trekker markets in PNG and overseas (e.g. forest biodiversity / heritage conservation). These resources have the potential to be degraded and demonstrate additionality.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>Select and research potential PES markets and assess feasibility with regards to environmental additionality requirements.</li> </ul>
Physical resources	<p><u>Physical resource strengths:</u></p> <ul style="list-style-type: none"> <li>Village VHF radios (some in need of maintenance) provide an essential communication link with KTA and other external partners.</li> </ul> <p><u>Physical resource weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>There are no physical resources in place at the community level to collect and record social and environmental data along the track.</li> </ul>	<p>Physical resources for social mapping, baseline data collection, monitoring, verification and reporting at the local level is limited.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>Select and research potential PES markets and assess feasibility with regards to physical resource requirements<sup>5</sup>.</li> </ul>

Market opportunities also relate to transforming structures and processes (internal and external). Table 29 presents the survey findings along the Kokoda Track with regards to:

- **Supportive factors** that can enhance the ability of landowners to manage their natural resources for the supply of environmental services;
- **Limiting factors** that can restrict the ability of landowners to manage their natural resources for the supply of environmental services.

**Table 29:** Transforming structures and processes with conclusions and recommendations for future environmental service activities

Structures & Processes	Findings	Conclusion and Recommendations
<p>External structures and processes</p>	<p><u>Supportive structures and processes:</u></p> <ul style="list-style-type: none"> <li>• Under Goal 3 of the KI Design Document, the Department of the Environment and Conservation (DEC) is implementing “a social mapping program in the interim protection zone (IPZ) to better understand the landowner communities and their environment in order to guide an effective consultative process... This work will shape the way in which the PNG Government engages with communities for protected area management into the future” (KI, 2013).</li> <li>• Under Goal 3 of the KI Design Document, DEC is “investing in activities that provide a strong foundation for effective management and protection of the Brown River catchment. Key achievements include forging strong partnerships with institutions including the Bishop Museum, the Forest Research Institute of Papua New Guinea and the Australian National Botanic Gardens to support a biodiversity capture and collection program and to continue capacity building and training in the areas of spatial mapping and archaeology”. DEC is also working with the Australian Cooperative Research Centre for Spatial Resource (CRC-SI) and chairs “a newly formed group of PNG GIS specialists to encourage Resource and data sharing among agencies and to work towards the development of national standards” (KI,2013).</li> <li>• Other potential partners for PES include the Office for Climate Change and Development (Monitoring, Verification and Reporting Programme) and the PNG Forest Authority (Climate Change and REDD Branch).</li> </ul> <p><u>Limiting structures and processes:</u></p> <ul style="list-style-type: none"> <li>• Current legislation, regulations and standards for PES operations in PNG are minimal. However, adherence to Free, Prior and Informed Consent (FPIC) principles is usually mandatory for REDD related initiatives.</li> </ul>	<p>DEC is coordinating social and spatial mapping programs that support catchment protection and protected area management within an interim protection zone (IPZ) that covers the KT area. This work is being undertaken with a team of specialists from PNG and Australia.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Discuss the potential for utilizing the PES approach to community engagement and forest conservation with DEC and partners. Discussions should include the Office for Climate Change and Development (Monitoring, Verification and Reporting Programme) and the PNG Forest Authority (Climate Change and REDD Branch);</li> <li>• Adhere to Free, Prior and Informed Consent (FPIC) principles which are usually mandatory for REDD related initiatives.</li> </ul>

**Table 29:** Transforming structures and processes with conclusions and recommendations for future environmental service activities (continued)

Structures & Processes	Findings	Conclusion and Recommendations
Internal structures and processes	<p><u>Supportive structures and processes:</u></p> <ul style="list-style-type: none"> <li>There are 4 key internal structures which have the potential to support PES activities along the track, namely: (i) clan groups, (ii) ward development committees, (iii) local church organizations and (iv) CBMs.</li> </ul> <p><u>Limiting structures and processes:</u></p> <ul style="list-style-type: none"> <li>In Area 1, some portions of customary land have been alienated by the state (mostly for agricultural developments). This situation has led to a more “cosmopolitan” arrangement with settlers moving in from other areas.</li> <li>There is minimal understanding along the Kokoda Track about Goal 3 of the KI Design Document, accompanied by a common view that the track benefits tour operators and trekkers more than landowners.</li> </ul>	<p>Local level structures and social networks have limited involvement with external environmental protection activities along the track. The CBM network does not provide any environmental services.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>Establish a management framework that (i) improves the coordination and delivery of natural resource management activities and (ii) maximizes the existing CBM network (refer Section 5.2.1).</li> </ul>

Table 30 uses scoring to facilitate the identification of options for environmental service activities along the Kokoda Track (1=low potential; 5=high potential) with reference to:

- **Current environmental strategies** for realizing income generation objectives;
- **Proposed environmental strategies** for future income generation activities.

**Table 30:** Assessment of income generation opportunities in the PES sector (1=low potential; 5=high potential)

Environmental service options	Start-up potential (low input)	Operational potential (low input)	Value adding potential	Return to labour	Likelihood of success	AVERAGE SCORE (priority)
Water catchment services to proposed Brown River hydro-power project	2	3	4	4	2	3
Forest biodiversity and heritage conservation services to the Kokoda Initiative and trekking industry	1	3	5	5	3	3

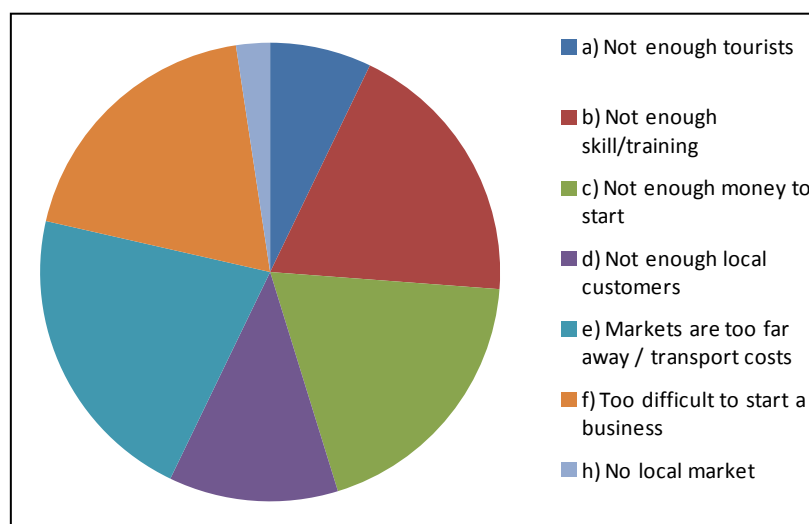


- Options for environmental services**
- **Option 1 (moderate potential)** relates to supply of water catchment services to the proposed Brown River hydro-power project outside Port Moresby.
  - **Option 2 (moderate potential)** relates to supply of forest biodiversity and heritage conservation services to the Kokoda Initiative and the trekking industry.
- Note:** Participatory tools and techniques for data collection and sharing have the potential to reduce ongoing operational costs, as well as increase landowner engagement and the likelihood of success.

## 5.2 Proposed Outputs

*How can the Livelihoods Project help local community groups to generate income from tourism, agriculture and environmental service markets using their available resources?*

The Sustainable Livelihoods Framework (refer Figure 1, page 2) draws attention to the fact that there are always different ways to realize the same outcome (some more likely to succeed than others). Brooks (1997) examined a variety of integrated community development projects across rural PNG, and identified 5 key impediments to small-scale businesses, namely: (i) Fragmented and distant markets; (ii) Lack of market information; (iii) Lack of basic infrastructure (especially transport and communication); (iv) Skills shortage and low labour productivity; and (v) Difficulty gaining access to credit. Figure 88 indicates there are similar income generation constraints along the Kokoda Track (particularly within Areas 2 and 3).



**Figure 88:** Answers to the KAP survey question: “What is the ONE biggest challenge in making more money in your community?”

Figure 87 (page 59) highlights 4 potential “entry-points” for future income generation activities along the Kokoda Track with reference to the Sustainable Livelihoods Framework, namely:

1. **Project Management Framework** is needed to establish cost-effective project delivery mechanisms in Areas 1, 2 and 3 that bridge the gap between the project’s external and local level stakeholders (relates to challenges a, b, c, d, e, f and h).
2. **Community Resource Centres** are needed to strengthen human resource capacity to generate income (and also tackle cross-cutting issues discussed in Section 5.2.4) in Areas 1, 2 and 3 (relates to challenges a, b, d, f and h).
3. **Finance Support Services** are needed to reduce financial constraints for feasible income generation enterprises in Areas 1, 2 and 3 (relates to challenge c and f).
4. **Transport Support Services** are needed to reduce provincial market access constraints for feasible agricultural enterprises in Area 2 (relates to challenge e).

The 4 proposed outputs for future livelihoods activities listed above are considered in more detail in Sections 5.2.1 to 5.2.4 with reference to the Sustainable Livelihoods Framework (refer Figure 87, page 58) and selected assessment criteria.

### 5.2.1. Project Management Framework

Rural development interventions frequently fail to realize their desired objectives. The lessons learned from past projects often reveal similar short-comings, including limited planning, poor participation of local actors and ineffective monitoring (Hart et al, 2006). IFAD (2001) maintains project participation “means more than just beneficiary contribution to project execution...participation is about agreed outcomes and accountability, about negotiating and developing a common understanding. Participation leads to empowerment, which implies a role in decision-making”.

IFC (2007) recommend a combined “bottom-up and top-down” participatory planning process for PNG’s tourism sector that engages landowners and integrates activities with national and international priorities. Their report emphasizes “community-based approaches are central to many tourism development plans around the world and that there is a growing realization that localized cooperation, trust and networking are essential ingredients in providing the right conditions for successful tourism development outcomes”. Wearing et al. (2009) have promoted a participatory approach to tourism along the Kokoda Track in which “the tourist is not given central priority but becomes an equal part of the system”. This concept seeks to bridge the different perspectives and understandings that exist between the landowner and the tourist.

The study findings reveal a large number of external agencies (public and private sector) working along the Kokoda Track, particularly within the more disadvantaged Areas 2 and 3. Whilst these organizations share similar livelihoods goals (i.e. education, health and income generation), their activities are largely uncoordinated leading to reduced effectiveness, impact and sustainability overall. Many village participants indicated they were keen to play a more active role in project planning activities to ensure appropriate strategies were developed for their local context. The proposed Project Management Framework should be designed to establish cost-effective project delivery mechanisms in Areas 1, 2 and 3 that bridge the gap between the project’s external and local stakeholders. The Project Management Framework relates to transforming structures and processes (internal and external) along the Kokoda Track. Table 31 presents the scoping study findings with regards to:

- **Supportive factors** that can enhance project delivery along the Kokoda Track;
- **Limiting factors** that can restrict delivery along the Kokoda Track.

**Table 31:** Structures and processes with conclusions and recommendations for the Project Management Framework

Structures & Processes	Findings	Conclusion and Recommendations
External structures and processes	<p><u>Supportive structures and processes:</u> Section 5.1.1, 5.1.2 and 5.1.3 highlight structures and processes that support income generation enterprises along the track. With regards to project management:</p> <ul style="list-style-type: none"> <li>• KTA’s CBM network provides the only field-based extension service (currently limited to tourism) along the track. This service is not working to full potential.</li> <li>• The SDA Church has widespread, ongoing and day-to-day influence in Areas 2 and 3 of Central and Oro Provinces. This institution is both well-organized and well-respected at village, district, national and international levels.</li> </ul>	The Project Management Framework should provide a combined “bottom-up and top-down” project delivery mechanism that bridges the gap between the project’s external and local level stakeholders. The CBM network has the potential to provide community liaison and communication services.



**Table 31:** Transforming structures and processes with conclusions and recommendations for the Project Management Framework (continued)

Structures & Processes	Findings	Conclusion and Recommendations
External structures and processes (continued)	<p><u>Supportive structures and processes (continued):</u></p> <ul style="list-style-type: none"> <li>The Kokoda Initiative has established a monitoring and evaluation framework with KDP.</li> <li>According to the Deputy Oro Provincial Administrator, the Oro Provincial Government has promised a certain amount of funding support for KTA in recent years (has yet to be fulfilled).</li> </ul> <p><u>Limiting structures and processes:</u></p> <p>Section 5.1.1, 5.1.2 and 5.1.3 highlight structures and processes that limit income generation enterprises along the track. With regards to project management, some village residents suggested:</p> <ul style="list-style-type: none"> <li>KTA ensures CBMs work for the community; rather than themselves;</li> <li>KTA, LLGs and the Provincial Government work together;</li> <li>KTA take responsibility for coordinating the different livelihoods activities along the track.</li> <li>Development partners should not come and go-way for good. Funding, training and follow-up support is needed;</li> <li>The project communicate better with Ward Development Committees and community representatives to link up with LLG plans and secure funding support from District Services Improvement Program;</li> <li>The project support activities that also benefit older men and women (who are unable to earn income from portering);</li> <li>The project achieve concrete results; rather than raises expectations that cannot be delivered.</li> </ul>	<p>The project management framework should be designed to improve coordination amongst the different agencies (public and private sector) that can support income generation activities along the track.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>Discuss the management framework concept with potential project partners from public and private sectors (including influential church agencies and district/provincial government representatives);</li> <li>Facilitate the design of an acceptable work programme that includes a well connected team of external project partners who are committed to collaborate on future income generation activities.</li> </ul>
Internal structures and processes	<p><u>Supportive structures and processes:</u></p> <p>Section 5.1.1, 5.1.2 and 5.1.3 highlight supportive internal factors for tourism, agriculture and PES enterprises along the track. With regards to the Project Management Framework:</p> <ul style="list-style-type: none"> <li>There are 4 key internal structures to collaborate with, namely: (i) clan groups, (ii) ward development committees, (iii) local church organizations and (iv) CBMs.</li> <li>The SDA Church has widespread, ongoing and day-to-day influence in Areas 2 and 3 of Central and Oro Provinces. This institution is both well-organized and well-respected at the local level.</li> <li>See next page</li> </ul>	<p>The Project Management Framework should engage local structures and social networks in income generation activities along the track. It should provide a combined “bottom-up and top-down” project delivery mechanism that bridges the gap between the project’s external and local level stakeholders. The CBM network has the potential to provide important community liaison and communication services.</p> <p>See next page</p>



**Table 31:** Transforming structures and processes with conclusions and recommendations for the Project Management Framework (continued)

Structures & Processes	Findings	Conclusion and Recommendations
Internal structures and processes	<p><u>Supportive structures and processes (continued):</u></p> <ul style="list-style-type: none"> <li>In Oro Province, most Ward Councillors are based in their village; working through their LLG office in nearby Kokoda and alongside their District and Provincial Government headquarters in Popondetta (forming an effective local level government network).</li> <li>Many village residents indicated they were keen to play a more active role in project planning activities to ensure appropriate strategies were developed for their local context.</li> <li>Community ownership and responsibility are becoming important issues for landowners along the track. Some residents proposed establishing a landowner company that looks after community affairs and livelihoods using revenue from trekking.</li> </ul> <p><u>Limiting structures and processes:</u></p> <p>Section 5.1.1, 5.1.2 and 5.1.3 highlight limiting internal factors for tourism, agriculture and PES enterprises along the track. With regards to the Project Management Framework:</p> <ul style="list-style-type: none"> <li>In Central Province, most Ward Councillors are based in Port Moresby working through their LLG, District and Provincial counterparts who are also based in Port Moresby.</li> <li>Most landowners currently have limited understanding about the Livelihoods Project (e.g. no material has been seen outlining the project’s strategic and operational objectives and activities).</li> <li>Some guesthouse owners recommended their community coordinate tourism activities within the village. This would help the community to allocate limited resources (e.g. food and fuel wood), and also address other issues, such as take steps to ensure school children attend school; rather than work as porters.</li> <li>Some village residents suggested their village community actively participate in and take ownership of tourism related activities. Landowners should establish an umbrella landowner company to ensure acceptable sharing of benefits from tourism.</li> </ul>	<p><u>Future livelihoods activities:</u></p> <ul style="list-style-type: none"> <li>Discuss the management framework concept with potential project partners (including clan groups, ward development committees, local church organizations and CBMs);</li> <li>Facilitate the design of an acceptable work programme that includes a well connected team of local partners who are committed to collaborate on future income generation activities.</li> </ul>

Table 32 uses scoring to facilitate the assessment of selected project management tools and techniques for 6 management functions.

**Table 32:** Assessment of project management tools and techniques for 5 management functions (1=low potential; 5=high potential) together with management costs (1=low cost; 5=high cost)

Management functions	Area	Group workshops & meetings	Site visits and discussions	VHF radio	Phone (voice & text)	Internet (website, email, skype)
Project planning	1,2,3	5	3	1	1	2
Coordination with community structures and social networks	1,2,3	3	5	3	2	1
Coordination with sub-national govt structures & processes	1,2,3	3	5	1	3	3
Coordination with the tourism, agricultural and PES sectors	1,2,3	3	5	1	4	4
Implementation through / by / with community-based mentors	1,2,3	2	5	5	2	1
Monitoring through / by / with community-based mentors	1,2,3	2	5	5	2	1
<b>Management costs (1=low cost; 5=high cost)</b>	1,2,3	5	4	3	2	1



### Project management tools and techniques

- **Group workshops and meetings** (high cost) are needed during project planning activities (both strategic and operational) to ensure project partners and landowners are committed to the project and understand how it will be delivered. Site visits and discussions can be used to maintain dialogue and reduce costs during project planning processes.
- **Group discussions and site visits** (quite high cost) are needed to ensure the project's annual work programmes are coordinated, implemented and monitored in a cost effective manner. VHF radio can be used to maintain dialogue with community structures and social networks. Phone and internet can be used to maintain dialogue with sub-national government agencies and the tourism, agricultural and PES sectors.
- **VHF radio** (moderate cost) is needed to maintain regular dialogue with CBMs during project implementation and monitoring since there is very limited mobile coverage along the Kokoda Track. Regular site visits and discussions are also needed to maintain the ongoing commitment and understanding of CBMs, as well as community structures and social networks.
- **Phone** (quite low cost) **and internet** (low cost) should be used to maintain dialogue with off-track project partners and the tourism, agricultural and PES sectors.

### 5.2.2. Community Resource Centres

Whilst the sustainable livelihoods approach recognizes there are many different livelihood strategies which can be developed for any given context, Chapman et al. (2003) conclude that “information and communication are always central driving forces of change”. They recommend information and communications systems that “build capacity of existing systems, use realistic technological approaches, and strengthen existing partnerships”.

PNG’s National Agricultural Development (NAD) Plan (2006-2017) identifies “agricultural research, extension, information services and training as driving forces of agricultural development for rural poverty reduction”. Whilst PNG’s national extension capacity has declined with the demise of the agricultural extension officer, a number of promising extension models have emerged through the efforts of NGOs, churches, donor projects, commodity institutes and agribusinesses. These initiatives “collectively...offer some guidance on possible pathways out of the current dilemma”. The NAD Plan recommends new initiatives retain some key features of the old system, namely:

- **Equity:** villages received regular visits from the Patrol Officer with specialist officers providing additional support as necessary.
- **Independence:** the Patrol Officers and the Administration that they represented were perceived as independent of clan and *wantok* influence. This independence appears to have been regarded as extremely important by communities, and thus conferred considerable respect and influence on the officers.
- **Continuity:** Regular access to new technologies, basic services and information.
- **People-centred:** The services provided to communities covered more than just food production, and dealt with many locally-important matters affecting their farm-based livelihoods.

The study findings indicate the need for improved extension services in Areas 1, 2 and 3 (particularly Areas 2 and 3). Most village participants (men, women and youth) indicated they were keen to diversify their income generation strategies (particularly within areas 2 and 3), but were lacking the necessary training, information and follow-up support services. These development constraints have contributed to the current situation where around 50% of landowner households in each sample village within Areas 2 and 3 of Central Province are residing permanently in Port Moresby. Out-migration seems to be continuing in many of these locations. The proposed Community Resource Centres should be designed to strengthen human resource capacity to generate income in Areas 1, 2 and 3. Table 33 presents the scoping study findings with regards to:

- **Community strengths** for the Resource Centres to build on;
- **Community weaknesses** for the Resource Centres to address.

**Table 33:** Community assets with conclusions and recommendations for Community Resource Centres

Community Assets	Survey Findings	Conclusion and Recommendations
Human resources	<p><u>Human resource strengths:</u></p> <p>Section 5.1.1, 5.1.2 and 5.1.3 highlight human resource strengths with regards to tourism, agriculture and PES enterprises along the track. With regards to information, communication and extension:</p>	<p>Community Resource Centres should increase village resident access to information, communication and extension services along the track. They should also provide internal and external partners, tourists, and local</p>

**Table 33:** Community assets with conclusions and recommendations for Community Resource Centres (continued)

Community Assets	Survey Findings	Conclusion and Recommendations
Human resources (continued)	<p><u>Human resource strengths (continued):</u></p> <ul style="list-style-type: none"> <li>• There are 17 CBMs (4 female) in Central Province and 5 CBMs (1 female) in Oro Province. These village based extension officers have the potential to offer equity and continuity within their village area, as well as an independent, people-centred approach (being paid by KTA).</li> <li>• Landowners are willing to learn new skills and develop new opportunities. They are also often prepared to work very hard to generate income (e.g. porters).</li> </ul> <p><u>Human resource weaknesses / concerns:</u> Section 5.1.1, 5.1.2 and 5.1.3 highlight human resource weaknesses with regards to tourism, agriculture and PES enterprises along the track. With regards to information, communication and extension:</p> <ul style="list-style-type: none"> <li>• Most CBMs are not working to their full potential.</li> <li>• Qualifications and formal work experience levels along the track are generally low (particularly Areas 2 and 3) with most well-educated people living and working in Port Moresby. Formal work experience along the track is mostly restricted to the tourism sector (particularly Areas 2 and 3).</li> <li>• Male qualifications and formal work experience are significantly greater than their female counterparts.</li> <li>• Around 50% of landowner households in each sample village within Areas 2 and 3 of Central Province are residing permanently in Port Moresby. Out-migration seems to be continuing in many of these locations. For example, 2 out of 3 sample villages in Area 3 of Central Province were virtually empty, with most residents visiting Port Moresby.</li> </ul> <p>Some village residents suggested:</p> <ul style="list-style-type: none"> <li>• They were keen to diversify their income generation strategies (particularly within areas 2 and 3), but were lacking the necessary training, Information and follow-up support services.</li> <li>• CBMs need adequate training, and follow-up training to build their capacity to assist local income generation enterprises.</li> <li>• Market research was needed to identify what tourists want and what can be delivered (e.g. flowers, orchids, gifts, cakes, hot drinks).</li> </ul>	<p>entrepreneurs with an attractive and convenient focal-point for local livelihoods activities. CBMs have the potential to provide each Community Resource Centre with applied extension services that offer equity and continuity within their village area, as well as an independent (being employed by KTA), people-centred approach.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Identify priority information, communication and extension needs (e.g. business planning and marketing, adult literacy and speaking English, women’s projects);</li> <li>• Identify priority income generation products and services (refer Sections 5.1.1, 5.1.2 and 5.1.3);</li> <li>• Select and train CBMs to deliver priority extension services for their community, and monitor their performance. Each Community Resource Centre should have one male and one female CBM selected for their social standing within the community, as well as their skills and experience (refer Table 18 / Activity 4, page 53).</li> </ul>

**Table 33:** Community assets with conclusions and recommendations for Community Resource Centres (continued)

Community Assets	Survey Findings	Conclusion and Recommendations
Human resources (continued)	<ul style="list-style-type: none"> <li>• Adult literacy programs need to be conducted for people to make informed choices - so locals will have that freedom of choice on what they can do and be productive in it.</li> <li>• Speaking English training could build the confidence and capacity of landowners working with tourists (e.g. porters) to cater for their customer needs (including safety).</li> <li>• There should be women-specific projects and activities (e.g. sewing, catering, floriculture, bilums, fish farming, poultry, and pigs).</li> <li>• Adequate initial awareness on specific projects was essential.</li> </ul>	<ul style="list-style-type: none"> <li>• See previous page</li> </ul>
Physical resources	<p><u>Physical resource strengths:</u> Section 5.1.1, 5.1.2 and 5.1.3 highlight physical resource strengths with regards to tourism, agriculture and PES enterprises along the track. With regards to Information, communication and extension:</p> <ul style="list-style-type: none"> <li>• Village participants raised the resource centre concept at a variety of locations on both sides of the Kokoda Track. The Kokoda Council of Women have already secured a piece of land at the Kokoda Station for a “Women’s Resource Centre”.</li> <li>• Whilst internet and power services along the Kokoda track are very limited, solar panels offer a tried and tested means of generating power for simple Information and communication facilities (e.g. CD player, computer, multi-media projector, speakers, lighting, tablet).</li> <li>• NARI’s outreach and liaison program provides Information resources (e.g. pamphlets on crops and production systems) at Laloki, and assists interested communities to establish local multiplication centres/nurseries on their own land using their own resources. Community ownership of local resource centres is essential - NARI only respond to community groups that ask for assistance and provide their own resources for nurseries etc.</li> </ul> <p><u>Physical resource weaknesses:</u> Section 5.1.1, 5.1.2 and 5.1.3 highlight physical resource weaknesses with regards to tourism, agriculture and PES along the track. With regards to Information, communication and extension:</p> <ul style="list-style-type: none"> <li>• Village communities along the track have very limited access to training materials and resources. Training course participants (including CBMs) usually had copies of the training materials they had been given.</li> </ul>	<p>Community Resource Centres will increase village resident access to information, communication and extension services along the track. They should be equipped with attractive and appropriate tools and technologies for local CBMs to manage and share.</p> <p><u>Future livelihoods activities should:</u></p> <ul style="list-style-type: none"> <li>• Identify priority information, communication and extension needs (e.g. business planning and marketing, adult literacy and speaking English, women’s projects);</li> <li>• Select / develop a variety of training and awareness resources that tackle priority information, communication and extension needs;</li> <li>• Establish trial Community Resource Centre(s) equipped with a variety of resources for local priorities at selected location(s) and monitor performance;</li> <li>• Scale up and replicate Community Resource Centres as appropriate.</li> </ul>

Table 34 uses scoring to facilitate the assessment of selected tools, equipment and techniques for Community Resource Centres along the Kokoda Track.

**Table 34:** Assessment of extension tools and techniques for Community Resource Centres along the Kokoda Track (1=low potential; 5=high potential)

Information and communication options	Area	Start-up potential (low input)	Operational potential (low input)	Community engagement potential	Potential cost-benefit ratio	Likelihood of success & replication	AVERAGE SCORE (priority)
Train community based mentors (i.e. train the trainer)	1,2,3	2	3	5	5	5	4
Use external trainers (i.e. bring in specialists)	1,2,3	4	2	3	3	3	3
Involve visitors (e.g. tour companies, trekkers, volunteers, local entrepreneurs)	1,2,3	5	5	5	5	5	5
Use physical materials (e.g. booklets, pamphlets etc)	1,2,3	3	3	5	5	5	4
Use electronic materials (e.g. CD player, computer etc with solar)	1,2,3	4	4	5	5	5	5



### Community Resource Centre tools and techniques

- **Visitors including trekkers, tour operators, volunteers and successful local entrepreneurs** (low cost) can provide community groups, income generation enterprises and interested individuals with on-site specialist extension services. Village residents can also visit successful local entrepreneurs in other villages.
- **Electronic resources including PowerPoint presentations and videos** (quite low cost) can provide community groups, income generation enterprises and interested individuals with on-site awareness and training sessions.
- **Physical resources including booklets and pamphlets** (moderate cost) can provide community groups, income generation enterprises and interested individuals with on-site awareness and training materials.
- **Community based mentors** (quite low-moderate cost) can provide community groups, income generation enterprises and interested individuals with ongoing, on-site extension services on priority topics using Community Resource Centre tools and equipment.
- **Specialist external trainers** (moderate cost) can train CBMs (or other local trainers), as well as assist on-site when a greater depth of knowledge is needed (CBMs should not go beyond their technical capacity).



### 5.2.3. Finance Support Services

Curry (2005) draws attention to the fact that village businesses in PNG are often embedded in social obligations which increases their likelihood of failure. Successful and sustainable village businesses usually avoid costly inputs and expensive commercial loans. Whilst many rural communities in PNG need business awareness and training, Brooks (1996) maintains the conventional linear models that ignore local processes (often circular) should be treated with caution. Rather, each community should be assisted to develop its own business model that suits the local context, as well as covers business start-up and ongoing operational costs. This means lead entrepreneurs should be selected for their social standing within the community, as well as their business skills and experience. Brooks recommends a “process of combined small business and community development education...with ongoing extension support / local coordination in the field”, followed by micro-credit support if needed.

With regards to credit schemes for rural entrepreneurs, communities need to understand and accept the fundamental principle that what goes out must come back. Brooks (1996) distinguishes between profitable credit schemes that provide larger loans to the commercial sector, and less profitable micro-finance schemes that provide smaller loans to the “un-bankable” sector with support from donor agencies. Kada Poroman Micro-Finance Limited (previously Kokopo Micro Finance) exemplifies a modern micro-finance facility that received start-up finance from the Kokopo DSIP in 2005 and is operating with over 20,000 customers.

The study findings indicate that many village residents are looking for new opportunities to generate income through agriculture and tourism, but have limited access to business training and start-up finance. In Areas 2 and 3, Central Province residents were found to have extremely limited access to both formal and informal credit services. Whilst many of these families are purchasing small amounts of imported items from district and provincial centres for re-sale within the village, only one trade store has been established (with start-up finance from KTA’s ward development funds). The proposed Finance Support Services should be designed to reduce financial constraints for feasible income generation enterprises in Areas 1, 2 and 3. Table 35 presents the scoping study findings with regards to:

- **Community strengths** for Finance Support Services to build on;
- **Community weaknesses** for Finance Support Services to address.

**Table 35:** Community assets with conclusions and recommendations for Finance Support services

Community Assets	Survey Findings	Conclusion and Recommendations
Financial resources	<p><u>Financial strengths:</u> Section 5.1.1, 5.1.2 and 5.1.3 highlight financial resource strengths regarding tourism, agriculture and PES. With regards to Finance Support:</p> <ul style="list-style-type: none"> <li>• Tourism and market sales are the primary source of income along the track, together with cash cropping in Area 1.</li> <li>• Some guesthouse owners were able to save money, and a few had received (and repaid) loans for guesthouse improvements from tour operators and existing connections with credit services in Port Moresby.</li> </ul>	<p>Finance Support will reduce financial constraints for feasible income generation enterprises along the track. A ‘revolving’ finance scheme provides a potentially sustainable mechanism for managing community expectations along the track with regards to ongoing project funding, in a way that combines community ownership and commitment with small business training &amp; support.</p>



**Table 35:** Community assets with conclusions and recommendations for Finance Support services (continued)

Community Assets	Survey Findings	Conclusion and Recommendations
Financial resources (continued)	<ul style="list-style-type: none"> <li>• Some CBMs are successfully assisting male and female entrepreneurs with small business management, particularly in the areas of pricing, cash flow management and savings for the future (following their basic business management trainings). CBMs could potentially provide more business awareness and planning services (including finance applications) with the appropriate training, resources and support.</li> <li>• Existing community exchange processes could be used to re-enforce the micro-finance principle that what goes out must come back. This fundamental standard is also well in line with SDA values of saving and financial accountability.</li> <li>• The pilot-projects that were established in 2010 under the Livelihoods / Micro-business Support Project have created an expectation that KTA will continue to finance the establishment of village enterprises. A ‘revolving’ livelihoods finance scheme provides a potentially sustainable mechanism for managing this expectation in a way that combines community ownership and commitment with small business training and support.</li> </ul> <p><u>Financial weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>• In all areas, village residents have limited access to formal and informal credit services (particularly Areas 2 and 3).</li> </ul>	<p><u>Finance Support services should:</u></p> <ul style="list-style-type: none"> <li>• Adopt an overall approach that involves local structures and processes in the development of appropriate business models and micro finance standards for their community;</li> <li>• Further train CBMs to deliver business awareness, business planning, finance application and ongoing extension services for priority income generation products and services (refer Sections 5.1.1, 5.1.2 and 5.1.3) using Community Resource Centre tools and equipment;</li> <li>• Prepare guidelines for screening and selecting applications for funding (i.e. selection criteria, as well as internal and external decision-making procedures) in an equitable and transparent manner. Lead entrepreneurs should be selected for their social standing within the community, as well as their skills and experience;</li> <li>• Prepare templates for funding agreements outlining partner responsibilities, as well as loan repayment schedules.</li> </ul>

Table 36 uses scoring to facilitate the assessment of management options for Finance Support Services.

**Table 36:** Assessment of small business finance options (1=low potential; 5=high potential)

Small business finance options	Area	Start-up potential (low input)	Operational potential (low input)	Community engagement potential	Potential cost-benefit ratio	Likelihood of success & replication	AVERAGE SCORE (priority)
Ward management with support from KTA (through CBMs)	1,2,3	2	2	2	5	2	3
LLG management with support from KTA (through CBMs)	1,2,3	2	2	2	5	2	3
District management with support from KTA (through CBMs)	1,2,3	2	2	4	5	3	3
KTA management with support from CBMs	1,2,3	3	3	4	5	4	4
Existing finance scheme management with support from CBMs	1,2,3	5	5	3	5	4	4



### Finance Support Service arrangements

- **Option 1 (good potential) is for small business finance to be outsourced to an existing finance scheme in Port Moresby;** working through Community Resource Centres and CBM extension officers. This arrangement would maximize existing micro finance expertise and minimize project involvement, but may reduce community ownership and commitment.
- **Option 2 (good potential) is for small business finance to be managed by KTA;** working through Community Resource Centres and CBM extension officers. This arrangement is likely to be more popular than Option 1 at the community level, but will require additional capacity building inputs during the start-up and operational phases (decreasing over time).
- **Option 3 (moderate potential) is for small business finance to be managed by the two district administrations with support from KTA;** working through Community Resource Centres and CBM extension officers. This arrangement is likely to be quite popular at the community level, but is less likely to succeed than Option 2 due to existing district administration workloads and capacity.
- **Option 4 (moderate potential) is for small business finance to be managed by the two local level administrations with support from KTA;** working through Community Resource Centres and CBM extension officers. This arrangement is likely to be less popular at the community level than Option 3, and also constrained by existing local level administration workloads and capacity.
- **Option 5 (moderate potential) is for small business finance to be managed by each ward along the Kokoda Track with support from KTA;** working through Community Resource Centres and CBM extension officers. This arrangement is also likely to be unpopular at the community level, although links well with the annual ward development grants distributed by KTA. Ward level workloads and capacity are also likely to be less than their local level and district administrations.

### 5.2.4. Transport Support Services

KDP (2008) examined basic service delivery needs in the areas of health, education, water supply, sanitation and transport along the Kokoda Track. Their report found “the key transport service almost unanimously expressed by the communities was for affordable weekly air services to be re-established. At present no airlines provide regular air services to the communities along the track except for limited charter flights predominately for trekkers and their supplies. This means that for the majority of communities the only way to get produce to market, access serious emergency health care or travel to Port Moresby and between other communities along the track is by foot through very difficult terrain...Apart from the reintroduction of affordable and regular air services, three communities - Vesulogo, Nauro and Manari - expressed a desire for road services to be improved or established to their communities”.

The study findings confirmed that many village residents in Area 2 are looking for new opportunities to generate income through the sale of agricultural products to Port Moresby markets, but are constrained by the high cost of airfares (4 villages now have scheduled flights). Most of these people proposed airfare subsidies; many recalling the popular airfare discounts that were managed by KDP for a short period prior to the aviation accident in 2009. The proposed Transport Support Services should be designed to reduce provincial (i.e. Port Moresby) market access constraints for feasible income generation enterprises in Area 2. Table 37 presents the scoping study findings with regards to:

- **Community strengths** for the Transport Support Services to build on;
- **Community weaknesses** for the Transport Support Services to address.

**Table 37:** Community assets with conclusions and recommendations for Transport Support services

Community Assets	Survey Findings	Conclusion and Recommendations
Physical resources	<p><u>Physical resource strengths:</u></p> <ul style="list-style-type: none"> <li>• Landowners in Area 2 often have access to third level airstrips which provide scheduled and/or charter flights to district and/or provincial markets.</li> <li>• Some CBMs are successfully assisting male and female entrepreneurs with small business management, particularly in the areas of pricing, cash flow management and savings for the future (following their basic business management trainings). CBMs could potentially provide more business awareness and planning services (including transport applications) with the appropriate training, resources and support.</li> </ul> <p><u>Physical resource weaknesses / concerns:</u></p> <ul style="list-style-type: none"> <li>• Many Area 2 residents are keen to negotiate airfare subsidies to facilitate the sale of agricultural products to district and/or provincial markets.</li> <li>• Some added that unless airfares were subsidized across the board a transparent allocation system would be needed to avoid jealousy and misunderstanding.</li> </ul>	<p>Transport Support will reduce specific market access constraints for feasible agricultural enterprises in Area 2. Support services should focus on customer requirements with regards to products, prices and supply. This is likely to involve farmers from one location supplying a single market in Port Moresby; in a way that combines community organization and commitment with small business training and support.</p> <p><u>Transport Support Services should:</u></p> <ul style="list-style-type: none"> <li>• Adopt an overall approach that involves local structures and decision-making processes</li> <li>• Focus on meeting customer requirements with regards to products, prices and supply. This is likely to involve farmers from one location supplying a single market in Port Moresby;</li> <li>• See next page</li> </ul>

**Table 37:** Community assets with conclusions and recommendations for Transport Support services (continued)

Community Assets	Survey Findings	Conclusion and Recommendations
Physical resources	See previous page	<p><u>Transport Support services should:</u></p> <ul style="list-style-type: none"> <li>• Further train CBMs to deliver business awareness, business planning, transport application and ongoing extension services for selected agricultural products (refer Section 5.1.2) using Resource Centre resources;</li> <li>• Prepare guidelines for screening and selecting applications for transport (i.e. selection criteria, as well as internal and external decision-making procedures) in an equitable and transparent manner.</li> </ul>

Table 38 uses scoring to facilitate the assessment of management options for Finance Support Services.

**Table 38:** Assessment of small business transport options (1=low potential; 5=high potential)

Small business transport options	Area	Start-up potential (low input)	Operational potential (low input)	Community engagement potential	Potential cost-benefit ratio	Likelihood of success & replication	AVERAGE SCORE (priority)
Airfare subsidies for all flights to/from approved locations	2	1	1	5	1	4	2
Airfare subsidies for approved livelihoods activities as they arise (e.g. agricultural products for provincial markets)	2	3	3	5	4	4	4
Airfare subsidies for approved livelihoods activities on certain flights (e.g. one flight per week)	2	3	3	5	2	4	3
Airfare subsidies for approved livelihoods activities on certain flights (e.g. back loads on tour operator charters)	2	3	3	3	2	4	3



### Transport Support Service arrangements

- **Option 1 (good potential)** relates to the provision of airfare subsidies for approved livelihoods activities as they arise. This arrangement would assist selected farmers to meet their customer’s supply requirements (including groups of farmers supplying a single market in Port Moresby).
- **Option 2 (moderate potential)** relates to the provision of airfare subsidies for approved livelihoods activities on certain flights (e.g. one flight per week or backloads on tour operator charters). This arrangement would give farmers less flexibility to meet their customer’s supply requirements since they would be competing for aircraft space.
- **Option 3 (quite low potential)** is to provide airfare subsidies for all flights to/from approved locations. This arrangement would also give farmers less flexibility to their customer’s supply requirements since they would be competing for aircraft space.

**Note:** Transport services arrangements should be managed by KTA; working through selected transport service providers.

### 5.3 Cross Cutting Issues

*How can the Livelihoods Project help local community groups to become more resilient to external threats?*

Community vulnerability relates to external trends and shocks, as well as seasonal variations. The PNG context has always been challenging, and Papua New Guineas are well known for their ability to cope and respond. PNG agriculture is characterized by innovation and openness to change, with the rate of change increasing over the last 140 years (Bourke and Harwood, 2009). Figure 87 (page 59) highlights 3 potential “entry-points” which relate to current social, environmental and political issues along the Kokoda Track. Sections 5.3.1 to 5.3.3 considers these cross-cutting issues in more detail and with reference to the 4 outputs outlined in Section 5.2 (page 76).

#### 5.3.1 Climate Change

Climate change has the potential to undermine rural livelihoods in many parts of PNG through sea level rise, temperature increases, higher rainfall and possibly more extreme climatic events. Whilst the effects of climate change in PNG have been small so far, there is no reason to be complacent (Bourke and Harwood, 2009). For example, within the Kokoda Track area, climate change could lead to more severe dry periods in Central Province, as well as more intense rainfall events in Oro Province; resulting in food security issues on both sides of the Owen Stanley ranges.

Table 39 highlights the need to integrate measures that respond to climate change into each component of the Livelihoods Project, particularly in the areas of project management and information dissemination.

**Table 39:** Assessment of measures for responding to climate change (1=low relevance; 5=high relevance)

Response measures	Area	Output 1: Project management	Output 2: Livelihoods information	Output 3: Livelihoods finance	Output 4: Livelihoods transport
Adapt to the effects climate change (e.g. drought tolerant crops)	1,2,3	5	5	3	3
Mitigate against the causes of climate change (e.g. forest protection)	1,2,3	5	5	3	3



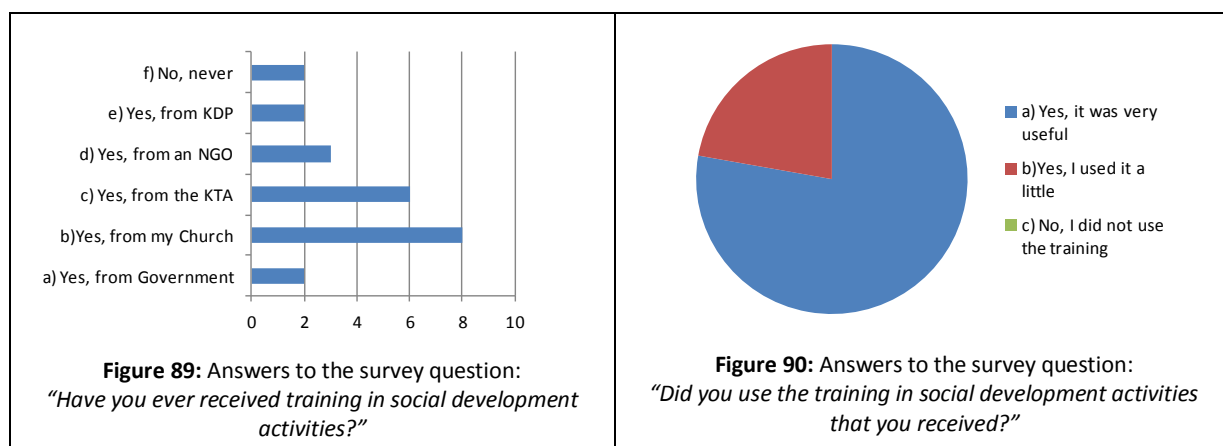
**Responding to climate change**

- **Establish a participatory monitoring framework** that includes data for measuring and responding to climate change indicators.
- **Raise awareness** (but not expectations) with regards to the causes and effects of climate change through Community Resource Centres and the CBM extension network.
- **Collaborate with agricultural agencies** (e.g. NARI) with regards to adapting to the negative effects of climate change along the track (e.g. drought tolerant crops).
- **Collaborate with DEC, PNGFA and OCCD** with regards to mitigating against the causes of climate change (e.g. forest protection and reforestation in Area 1).
- **Secure funding and technical support** for specific projects (e.g. ACIAR and ITTO).

### 5.3.2 Social Issues

Increased income generation should lead to desirable outcomes, such as increased well-being, reduced vulnerability, improved food security and more sustainable use of the natural resource base (DFID, 1999). However, income generation activities may also produce unintended and undesirable effects within participating households, villages and the wider community.

The study findings identified the church as an important local institution; providing overall guidance on the village congregation’s social, physical, mental and spiritual development. The KAP survey form found that social development trainings are also being undertaken effectively by other organizations working along the track including KTA (refer Figures 89-90). Table 40 provides a summary of social issues related to tourism that were raised during the survey consultations.



**Table 40:** Summary of tourism related social issues raised during the survey consultations.

Current social issues
<ul style="list-style-type: none"> <li>• Increased costs of village items (e.g. rice and soap)</li> <li>• Increase in STI and HIV/AIDS (as reported by a community health officer)</li> <li>• Rise in the use of alcohol and drugs</li> <li>• More law and order problems</li> <li>• Women and children are less secure when husbands and fathers are away porting</li> <li>• Domestic violence increases during the trekking season, especially involving porters consuming alcohol after getting paid</li> <li>• More internal disputes (e.g. landownership)</li> <li>• Nowadays students are not fully committed to their studies</li> <li>• More people directly violating church principles/doctrines (e.g. trekking on the Sabbath)</li> <li>• Less attendance to church programmes and teachings</li> <li>• More people speaking Tok-Pisin and Hiri-Motu (i.e. less people speaking Tok-Ples)</li> <li>• The community doesn't work together so much</li> <li>• Less time available for non-income generating activities</li> <li>• Less attention given to gardening as a result of trekking with trekkers</li> <li>• Women and children sometimes left alone in the village when strong men and youth go portering; leaving women to take on men's responsibilities</li> <li>• School children working as porters; rather than attending school</li> <li>• Government workers (e.g. health officers) working as porters; rather than serving the community</li> </ul>

Table 41 highlights the need to integrate measures that respond to social issues into each component of the Livelihoods Project.

**Table 41:** Assessment of measures for responding to social issues (1=low relevance; 5=high relevance)

Response measures	Sites	Output 1: Project management	Output 2: Livelihoods information	Output 3: Livelihoods finance	Output 4: Livelihoods transport
Conduct socio-economic monitoring	1,2,3	5	3	3	3
Engage influential structures (local and external) and social networks	1,2,3	5	3	3	3
Promote positive community lifestyles	1,2,3	5	5	3	3



### Responding to social issues

- **Establish a participatory monitoring framework** that includes data for measuring and responding to positive and negative socio-economic indicators.
- **Engage and strengthen influential social networks** along the track (e.g. Kokoda Women’s Group).
- **Engage influential local level structures and decision-making processes** (e.g. ward development committees and church agencies).
- **Engage influential external structures and social development programs** (e.g. SDA church, KDP, District Government, Provincial Divisions of Health and Community Development).
- **Promote positive community lifestyles** (e.g. through Community Resource Centres and the CBM extension network).

### 5.3.3 Political Threats

Good governance and sustainable forest management go hand in hand. Forest governance involves local, national, regional and global structures and processes, which implies that forest management decision-making is usually complex, and prone to misunderstanding and disagreement (CIFOR, 2013). The Kododa Initiative (KI) is founded on a joint understanding between the PNG and Australian governments that focuses on the sustainable development of the Owen Stanley Ranges, Brown River catchment and Kokoda Track region while protecting its special natural, cultural and historic values.

Table 42 highlights the need to involve all levels of government in project management decision-making (particularly during the planning phase) through the appropriate channels. There is also a need to involve national and sub-national levels of government in the delivery of Outputs 2-4.



**Table 42:** Assessment of measures for maintaining political support (1=low relevance; 5=high relevance)

Response measures	Area	Output 1: Project management	Output 2: Livelihoods information	Output 3: Livelihoods finance	Output 4: Livelihoods transport
Involve Australian National Government through DSEWPaC and KI	1,2,3	5	2	2	2
Involve PNG National Government through District and Regional Members	1,2,3	5	4	4	4
Involve Provincial, District and LLG members through Ward Councillors	1,2,3	5	4	4	4

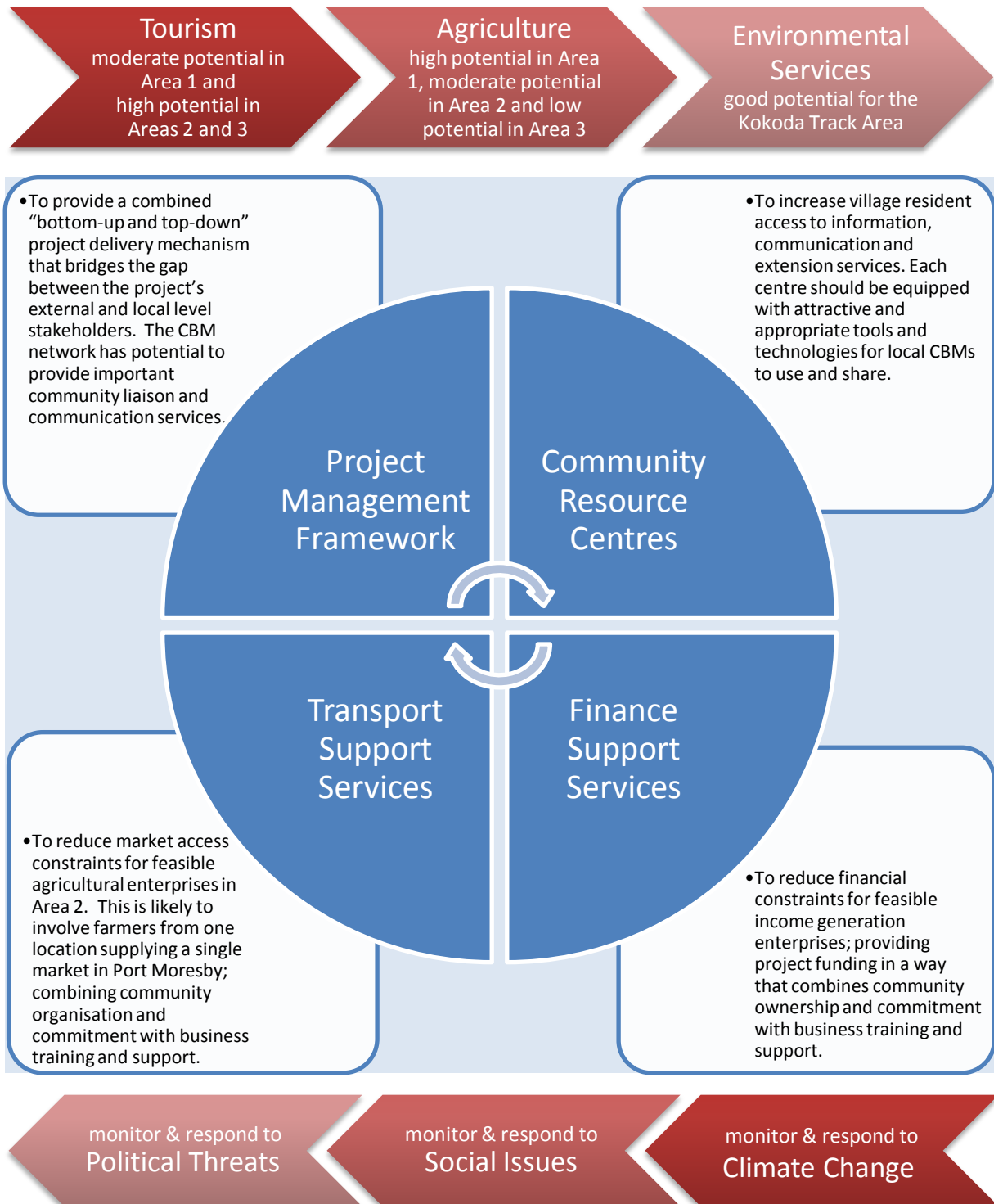


### Responding to climate change issues

- **Involve Australian National Government** in project activities through DOTE and KI.
- **Involve PNG National Government** in project activities through District and Regional Members.
- **Involve Provincial, District and LLG members** in project activities through Ward Councillors.

## 6. Conclusions and Recommendations

Section 6.1 (page 95) presents the main conclusions and recommendations regarding project design and delivery since 2011. Sections 6.2.1, 6.2.2 and 6.3.3 provide the same information with regards to appropriate “entry-points” for future livelihoods activities. The proposed scope for future livelihoods activities is outlined in the diagram below, comprising: 3 Income Generation Markets (top line), 4 Project Outputs (middle circle) and 3 Cross Cutting Issues (bottom line).



**Figure 91:** Proposed scope of future livelihoods activities comprising: 3 income generation markets (top line), 4 project outputs (middle circle) and 3 cross-cutting issues (bottom line).

## 6.1 Livelihoods Project: *Progress to-date*

Table 43 presents the main conclusions and recommendations with regards to project design and delivery since project inception in 2011.

**Table 43:** Main conclusions and recommendations drawn from the evaluation of the Livelihoods Project performance since 2011 (refer Sections 4.1-4.5 for complete findings).

CONCLUSIONS and RECOMMENDATIONS with regards to project design and delivery				
<p><b>1. Project Relevance</b> is high with regards to: (i) international, national, provincial and local level policies and priorities, (ii) other organizations working along the KT, and (iii) the priority needs of KT communities and trekkers? The project contributes directly to KI Goal 2 but only 1% of KI funds were spent on income generation activities during the period 2011-2013.</p>	<p><b>2. Project Efficiency</b> converting inputs to outputs has been limited by: (i) project management capacity, (ii) administrative constraints in Port Moresby and (iii) inadequate training, resources and support services for CBMs in the field. Overall, activities are around 46% completed with 28% of funds unspent.</p>	<p><b>3. Project Effectiveness</b> delivering outputs has been partly delayed by manufacturing issues and trainer/trainee availability. The planned CBM capacity building activities are around 10% complete which has also affected overall performance. Landowners are willing to participate, but becoming increasingly discouraged by slow progress. No outputs have been completed.</p>	<p><b>4. Project Impact</b> is hard to assess with no outputs delivered. However, the guesthouse certification programme looks promising with trainees making good use of their trainings and resources. CBMs are not working to full potential, since their planned trainings have not been completed. Overall, tourism is having both positive and negative social impacts along the track.</p>	<p><b>5. Project Sustainability</b> relates to output type. Low input, market driven enterprises with a reasonable return to labour (e.g. basic physiotherapy services) are most likely to be sustained and replicated. High external input operations (e.g. community sawmills) are less likely to be successful. Ongoing support is needed for CBM and certification activities.</p>
<p><u>Future activities should:</u></p> <p>1.1 Select and research target tourism markets to better understand their requirements with regards to tourism products, services, prices and supply.</p> <p>1.2 See next page</p>	<p><u>Future activities should:</u></p> <p>2.1 Ensure project staff (including CBMs) have the necessary training and support to carry out their duties. The Project Manager needs to provide 50% of his time to the project. The Livelihoods Officer needs some project management training.</p> <p>2.2 See next page</p>	<p><u>Future activities should:</u></p> <p>3.1 Complete the following project activities as soon as possible with reference to their key performance indicators / milestones and the scoping study recommendations (refer Section 4.3, page 48):</p> <ul style="list-style-type: none"> <li>a. Remaining toilet-sets delivered to certified guest-houses;</li> <li>b. 3rd guesthouse audit successfully completed</li> </ul>	<p><u>Future activities should:</u></p> <p>4.1 Develop a monitoring framework that involves CBMs, community representatives and tour operators / trekkers.</p> <p>4.2 Select a set of indicators (social, environmental and economic) to measure progress at impact level.</p> <p>4.3 See next page</p>	<p><u>Future activities should:</u></p> <p>5.1 Select and research target markets to better understand their requirements with regards to products services, prices (e.g. for certified operations) and supply.</p> <p>5.2 See next page</p>

**Table 43:** Main conclusions and recommendations drawn from the evaluation of the Livelihoods Project performance since 2011 (continued).

<b>CONCLUSIONS and RECOMMENDATIONS</b> with regards to project design and delivery				
<b>1. Relevance</b> (continued)	<b>2. Efficiency</b> (continued)	<b>3. Effectiveness</b> (continued)	<b>4. Impact</b> (continued)	<b>5. Sustainability</b> (continued)
<p>1.2 Establish a Project Management Framework (refer Section 5.2.1) that:</p> <ul style="list-style-type: none"> <li>a. Strengthens coordination and collaboration between key international, national and sub-national stakeholders (including tour operators);</li> <li>b. Ensures KT communities and CBMs participate in project planning and monitoring activities;</li> <li>c. Facilitates the design of an acceptable work programme and budget for income generation activities along the track.</li> </ul>	<p>2.2 Recruit 2 Field Coordinators for the Koiari and Kokoda LLGs.</p> <p>2.3 Establish Community Resource Centres that provide physical resources for CBMs to use and share in the field (refer Section 5.2.2).</p> <p>2.4 Follow a work plan that (i) contains 2-4 outputs that describe specific products (not activities) that the project will deliver over a given period (e.g. 5 years), and (ii) uses a standard numbering system that links activities to outputs from year to year.</p> <p>2.5 Provide CBMs with annual work plans to follow, monitor and report on that clearly link activities to outputs and desired outcomes from year to year.</p>	<ul style="list-style-type: none"> <li>c. Massage service available in 4 villages;</li> <li>d. Drying room and 2 community sawmills in operation.</li> </ul> <p>3.2 Put on hold all other planned activities for discussion with project stakeholders during the development of the work programme (refer What Next?, page 105).</p> <p>3.3 Follow a work plan that contains 2-4 outputs that describe specific products (not activities) that the project will deliver over a given period (e.g. 5 years) leading to the realization of the project objective and contribution to desired outcomes.</p> <p>3.4 Establish a Project Management Framework (refer Section 5.2.1) that ensures KT communities and CBMs participate in project planning and monitoring activities, and have copies of the project's objective and activities to refer to.</p>	<p>4.3 Communicate regularly with key local, provincial, national and international stakeholders (e.g. bi-annual reports).</p> <p>4.4 Monitor and respond to cross-cutting issues that are having / are likely to have unintended negative effects.</p>	<p>5.2 Focus on low external input, market driven income generation activities (refer Section 5.1.1) that (i) suit labour constraints, (ii) suit the physical location, and (iii) provide a reasonable return to labour.</p> <p>5.3 Establish suitable funding mechanism for:</p> <ul style="list-style-type: none"> <li>a. Guesthouse certification programme (e.g. through trekker/ guesthouse levy and/or financial support from DSIP/KI. Funding could be managed by KTA or TPA as part of their guest house accreditation programme;</li> <li>b. CBM programme (e.g. through trekker levy and/or financial support from DSIP/KI. Funding could be managed by KTA/KDP through the proposed Community Resource Centres (refer Section 5.2.2).</li> </ul>

## 6.2 Livelihoods Project: *Future scope*

### 6.2.1 Market Opportunities

Table 44 presents the main conclusions and recommendations with regards to aligning community resources with market opportunities.

**Table 44:** Community resources (strengths and weaknesses), income generation opportunities and recommendations for future livelihoods activities.

<p><b>CONCLUSIONS</b> with regards to community resources that are available for people to use (both strengths and weaknesses)</p>	<p><b>RECOMMENDATIONS</b> for aligning community resources with market opportunities</p>		
	<p><b>1. Tourism</b> has (i) moderate potential in Area 1 (end of track) and (ii) high potential in Areas 2 and 3. Potential markets for the future include Japanese trekkers and the domestic market, such as short distance trekkers and fly-in fly-out tourists who prefer to stay longer at one central location.</p>	<p><b>2. Agriculture</b> has (i) high potential in Area 1 (productive soils and good market access), (ii) moderate potential in Area 2 (limited land potential and limited market access), and (iii) low potential in Area 3 (limited land potential and no market access)</p>	<p><b>3. Payments for Environmental Services</b> have good potential since (i) the KT area provides significant water catchment and biodiversity conservation services to the government and tourism sectors, and (ii) there is a credible, ongoing threat of environmental degradation.</p>
<p><u>Financial resources:</u></p> <ul style="list-style-type: none"> <li>Access to finance for tourism, agricultural and environmental service enterprises is limited (particularly in Areas 2 and 3).</li> <li>Some guest-house owners have demonstrated capacity to save and repay loans.</li> </ul> <p><u>Human resources:</u></p> <ul style="list-style-type: none"> <li>Human resource capacity to engage in the tourism, agricultural and environmental service sectors is limited by labour availability (particularly in Areas 2 and 3) and access to Information, communication and extension services.</li> </ul>	<p>1.1 Select and research target tourism markets to better understand their requirements with regards to tourism products, services, prices and supply.</p> <p>1.2 Identify feasible low external input, market driven products and services that:</p> <ol style="list-style-type: none"> <li>Provide an alternative source of income to campsites and guesthouses;</li> <li>Suit labour constraints;</li> <li>Suit the physical location;</li> <li>Provide a reasonable return to labour.</li> </ol>	<p>2.1 Select and research target tourism, district and provincial markets to better understand customer requirements with regards to agricultural products, prices and supply.</p> <p>2.2 Identify feasible low external input, market driven products that:</p> <ol style="list-style-type: none"> <li>Suit labour constraints;</li> <li>Suit environmental constraints;</li> <li>Provide a reasonable return to labour.</li> </ol> <p>2.3 See next page</p>	<p>3.1 Select and research potential PES markets and assess feasibility with regards to financial resource requirements.</p> <p>3.2 Select and research potential PES markets and assess feasibility with regards to human resource requirements.</p> <p>3.3 Select and research potential PES markets and assess feasibility with regards to environmental additionality requirements.</p> <p>3.4 Select and research potential PES markets and assess feasibility with regards to physical resource requirements.</p>

**Table 44:** Community resources (strengths and weaknesses), income generation opportunities and recommendations for future livelihoods activities (continued).

CONCLUSIONS (continued)	RECOMMENDATIONS for aligning community resources with market opportunities		
	1. Tourism (continued)	2. Agriculture (continued)	3. Payments for Environmental Services (continued)
<p><u>Natural resources:</u></p> <ul style="list-style-type: none"> <li>Area 1 has productive soils and high land potential for production of fresh fruit and vegetables, although land availability is an issue.</li> <li>Landowners in Areas 2 and 3 manage large areas of primary and secondary forest that provide a range of tourism, agricultural and environmental products/services. Some households also manage small home gardens. These resources have the potential to be degraded. Food security is a concern during extended dry periods.</li> </ul> <p><u>Physical resources:</u></p> <p>Physical resources are generally adequate for:</p> <ul style="list-style-type: none"> <li>The trekking industry - tourism opportunities vary according to village location; rather than access to markets and services. There is an over-supply of guesthouses and campsites.</li> <li>The sale of agricultural products to (i) tourists in Areas 1, 2 and 3, and (ii) district/ provincial markets in Area 1.</li> </ul> <p>Physical resources for environmental data collection at the local level are limited.</p>	<p>1.3 Ensure fair prices are paid for tourist products and services (e.g. keep pace with inflation).</p> <p>1.4 Facilitate land-use planning activities (clan and family levels) that consider sustainable production systems for tourism products and services that are sometimes in short supply (e.g. production of firewood, fruit and poultry from integrated home gardens).</p> <p>1.5 Build capacity of CBM network to deliver priority information, communication and extension services along the KT (refer Section 5.2.2).</p> <p>1.6 Establish Community Resource Centres that provide physical resources for CBMs to use and share in the field (refer Section 5.2.2).</p> <p>1.7 Provide finance support for feasible tourism enterprises (refer Section 5.2.3).</p>	<p>2.3 Facilitate land-use planning activities (clan and family levels) that consider sustainable production systems for agricultural products and services that are sometimes in short supply (e.g. production of firewood, fruit and poultry from integrated home gardens).</p> <p>2.4 Build capacity of CBM network to deliver priority information, communication and extension services along the KT (refer Section 5.2.2).</p> <p>2.5 Establish Community Resource Centres that provide physical resources for CBMs to use and share in the field (refer Section 5.2.2).</p> <p>2.6 Provide finance support for feasible agricultural enterprises (refer Section 5.2.3).</p> <p>2.7 Provide transport support for feasible demonstration enterprises in Area 2 (refer Section 5.2.4).</p>	<p>See previous page</p>



Table 45 presents the main conclusions and recommendations with regards to aligning transforming structures and processes with market opportunities.

**Table 45:** Transforming structures and processes (internal and external), income generation opportunities and recommendations for future livelihoods activities.

<p style="text-align: center;"><b>CONCLUSIONS</b> with regards to structures and processes (both internal and external) that either support or limit people’s ability to use their resources</p>	<p style="text-align: center;"><b>RECOMMENDATIONS</b> for aligning transforming structures and processes with market opportunities</p>		
	<p><b>1. Tourism</b> has (i) moderate potential in Area 1 (end of track) and (ii) high potential in Areas 2 and 3. Potential markets for the future include Japanese trekkers and the domestic market, such as short distance trekkers and fly-in fly-out tourists who prefer to stay longer at one central location.</p>	<p><b>2. Agriculture</b> has (i) high potential in Area 1 (productive soils and good market access), (ii) moderate potential in Area 2 (limited land potential and market access), and (iii) low potential in Area 3 (limited land potential and no market access)</p>	<p><b>3. Payments for Environmental Services</b> have good potential since (i) the KT area provides significant water catchment and biodiversity conservation services to the government and tourism sectors, and (ii) there is a credible, ongoing threat of environmental degradation.</p>
<p><u>External structures and processes:</u> There is limited coordination amongst the different agencies (public and private sector) operating along the track. KTA’s CBM network provides the only field-based extension service (currently limited to tourism). KTA’s Commercial Operators Licence Handbook (2012) requirements are not always followed.</p> <p><u>Internal structures and processes:</u> Local structures and social networks have limited involvement with income generation activities along the track. Most CBMs are not working to their full potential.</p>	<p>1.1 Ensure KTA regulations support local tourism enterprises (e.g. rates set for guesthouses and porters keep pace with inflation).</p> <p>1.2 Ensure KTA enforces the Commercial Operators Licence Handbook (2012) regulations (e.g. load limit and return flight or equivalent in cash).</p> <p>1.3 Establish a management framework that:</p> <ul style="list-style-type: none"> <li>a. Improves the coordination and delivery of tourism activities along the track;</li> <li>b. Maximizes the existing CBM network (refer Section 5.2.2);</li> <li>c. Engages local structures and decision-making processes;</li> <li>d. Enhances community ownership and responsibility for tourism activities.</li> </ul>	<p>2.1 Establish a management framework that:</p> <ul style="list-style-type: none"> <li>a. Improves the coordination and delivery of agricultural research and development activities along the track;</li> <li>b. Maximizes the existing CBM network (refer Section 5.2.2);</li> <li>c. Engages local structures and decision-making processes;</li> <li>d. Enhances community ownership and responsibility for tourism activities along the track.</li> </ul>	<p>3.1 Discuss the potential for utilizing the PES approach to community engagement and forest conservation with DEC and partners. Discussions should include the Office for Climate Change and Development (Monitoring, Verification and Reporting Programme) and the PNG Forest Authority (Climate Change and REDD Branch).</p> <p>3.2 Adhere to Free, Prior and Informed Consent (FPIC) principles which are usually mandatory for REDD related initiatives.</p>

Table 46 presents the main conclusions and recommendations with regards to potential income generation strategies for each market opportunity.

**Table 46:** Strategies for maximizing income generation opportunities and realizing desired community outcomes.

<b>POTENTIAL INCOME GENERATION STRATEGIES</b> for each market opportunity		
<p><b>1. Tourism</b> has (i) moderate potential in Area 1 (end of track) and (ii) high potential in Areas 2 and 3. Potential markets for the future include Japanese trekkers and the domestic market, such as short distance trekkers and fly-in fly-out tourists who prefer to stay longer at one central location.</p> <ul style="list-style-type: none"> <li>• <b>Option 1 (high potential)</b> relates to the supply of additional local products and services that complement the services offered by local campsites and guesthouses. Strategies for Area 1 include the supply of local artefacts and gifts within a market setting for tourists, guides and porters at the end of their trek. Strategies for Areas 2 and 3 include the development of integrated home gardens that supply fresh fruit, vegetables and protein, together with complementary services that add value to guesthouse operations such as healthy meals, basic physiotherapy, hair-braiding and laundry.</li> <li>• <b>Option 2 (good potential)</b> relates to the establishment of demonstration local tour companies that offer a competitive alternative to existing operations from overseas.</li> <li>• <b>Option 3 (moderate potential)</b> relates to strengthening campsite and guesthouse operations in Areas 2 and 3 that are accredited under the guesthouse certification programme.</li> <li>• <b>Option 3 (moderate potential)</b> relates to the supply of local tour guides and porters that offer a competitive alternative to external labour.</li> </ul>	<p><b>2. Agriculture</b> has (i) high potential in Area 1 (productive soils and good market access), (ii) moderate potential in Area 2 (limited land potential and market access), and (iii) low potential in Area 3 (limited land potential and no market access)</p> <ul style="list-style-type: none"> <li>• <b>Option 1 (good potential)</b> relates to the sale of fresh fruit, vegetables, protein and prepared food from Areas 1, 2 and 3 to tour operators and trekkers. Strategies include the development of integrated home gardens that supply fresh fruit, vegetables and protein close at hand; adding value where possible by cooking meals, preparing fruit etc.</li> <li>• <b>Option 2 (moderate potential)</b> relates to the sale of fresh fruit, vegetables, cash crops and protein from Area 1 to district and/or provincial markets. Network Kokoda and the National Research Institute are potential partners.</li> <li>• <b>Option 3 (quite poor potential)</b> relates to the sale of cash crops, fruit and vegetables from Area 2 to Port Moresby markets. Potential for these enterprises could be increased with the provision of transport support services for feasible enterprises (refer Section 5.2.4).</li> </ul>	<p><b>3. Payments for Environmental Services</b> have good potential since (i) the KT area provides significant water catchment and biodiversity conservation services to the government and tourism sectors, and (ii) there is a credible, ongoing threat of environmental degradation.</p> <ul style="list-style-type: none"> <li>• <b>Option 1 (moderate potential)</b> relates to supply of water catchment services to the proposed Brown River hydro-power project outside Port Moresby.</li> <li>• <b>Option 2 (moderate potential)</b> relates to supply of forest biodiversity and heritage conservation services to the Kokoda Initiative and the trekking industry.</li> </ul> <p><b>Note:</b> Participatory tools and techniques for data collection and sharing have the potential to reduce ongoing operational costs, as well as increase landowner engagement and the likelihood of success.</p>

## 6.2.2 Proposed Outputs

Table 47 presents the main conclusions and recommendations with regards to aligning resources, structures and processes with the 4 project outputs.

**Table 47:** Income generation constraints, proposed project outputs and recommendations for future livelihoods activities.

	<b>RECOMMENDATIONS</b> for aligning resources, structures and processes with the 4 proposed project outputs			
	<b>1. The Project Management Framework</b> should provide a combined “bottom-up and top-down” project delivery mechanism that bridges the gap between the project’s external and local level stakeholders. The CBM network has potential to provide community liaison and communication services.	<b>2. Community Resource Centres</b> should increase village resident access to Information, communication and extension services. Each centre should be equipped with attractive and appropriate tools and technologies for local CBMs (i.e. village based extension officers) to manage and share.	<b>3. Finance Support Services</b> should reduce financial constraints for feasible income generation enterprises along the track; providing communities with project funding in a way that combines community ownership and commitment with small business training and support.	<b>4. Transport Support Services</b> should reduce market access constraints for feasible agricultural enterprises in Area 2; probably involving farmers from one location supplying a single market in Port Moresby in a way that combines community organisation and commitment with business training and support.
<p><b>CONCLUSIONS</b> with regards to income generation constraints and proposed project outputs</p>				
<p><u>Management Framework:</u></p> <ul style="list-style-type: none"> <li>There is limited coordination amongst the different development agencies operating along the track. KTA’s CBM network provides the only field-based extension service (currently limited to tourism).</li> <li>Local level structures and social networks have limited involvement with income generation activities along the track.</li> </ul>	<p>1.1 Discuss the management framework concept with potential project partners from external agencies (including influential church agencies and district/provincial government representatives).</p> <p>1.2 Discuss the management framework concept with potential project partners from internal groups (including clan groups, ward development committees, local church organizations and CBMs).</p>	<p>2.1 Identify priority information, communication and extension needs (e.g. business planning and marketing, adult literacy and speaking English, women’s projects).</p> <p>2.2 Identify priority income generation products and services (Sections 5.1.1, 5.1.2 and 5.1.3).</p> <p>2.3 See next page</p>	<p>3.1 Adopt an overall approach that involves local structures and processes in the development of appropriate business models and micro finance standards for each community.</p> <p>3.2 See next page</p>	<p>4.1 Adopt an overall approach that involves local structures and decision-making processes.</p> <p>4.2 Focus on meeting customer requirements with regards to products, prices and supply. This is likely to involve farmers from one location. supplying a single market in Port Moresby.</p> <p>4.3 See next page</p>

**Table 47:** Income generation constraints, proposed project outputs and recommendations for future livelihoods activities (continued).

CONCLUSIONS (continued)	RECOMMENDATIONS for aligning resources, structures and processes with the 4 proposed project outputs			
	1. The Project Management Framework (continued)	2. Community Resource Centres (continued)	3. Finance Support Services (continued)	4. Transport Support Services (continued)
<p><u>Resource Centres:</u></p> <ul style="list-style-type: none"> <li>Human resource capacity to engage in the tourism, agricultural and environmental service sectors is limited by labour availability (particularly in Areas 2 and 3) and access to Information, communication and extension services.</li> </ul> <p><u>Finance Support:</u></p> <ul style="list-style-type: none"> <li>Access to finance for tourism, agricultural and environmental service enterprises is limited (particularly in Areas 2 and 3).</li> <li>Some guest-house owners have demonstrated capacity to save and repay loans.</li> </ul> <p><u>Transport Support:</u></p> <p>Physical resources are generally adequate for the sale of agricultural products to (i) tourists in Areas 1, 2 and 3, and (ii) district/ provincial markets in Area 1.</p>	<p>1.3 Facilitate the design of an acceptable work programme that includes a well connected team of project partners (internal and external) who are committed to collaborate on future income generation activities.</p>	<p>2.3 Select and train CBMs to deliver priority extension services for their community, and monitor their performance (each Community Resource Centre should have one male and one female CBM selected for their social standing within the community, as well as their skills and experience).</p> <p>2.4 Select / develop a variety of training and awareness resources that tackle priority Information, communication and extension needs.</p> <p>2.5 Establish trial Community Resource Centre(s) equipped with a variety of resources for local priorities at selected location(s) and monitor performance.</p> <p>2.6 Scale up and replicate Community Resource Centres as appropriate.</p>	<p>3.2 Further train CBMs to deliver business awareness, business planning, finance application and ongoing extension services for priority income generation products and services (refer Sections 5.1.1, 5.1.2 and 5.1.3) using Community Resource Centre resources.</p> <p>3.3 Prepare guidelines for screening and selecting applications for funding (i.e. selection criteria, as well as internal and external decision-making processes) in an equitable and transparent manner. Lead entrepreneurs should be selected for their social standing within the community, as well as their skills and experience.</p> <p>3.4 Prepare templates for funding agreements outlining partner responsibilities, as well as loan repayment schedules.</p>	<p>4.3 Further train CBMs to deliver business awareness, business planning, transport application and ongoing extension services for selected agricultural products (refer Section 5.1.2) using Community Resource Centre resources.</p> <p>4.4 Prepare guidelines for screening and selecting applications for transport (i.e. selection criteria, as well as internal and external decision-making procedures) in an equitable and transparent manner.</p>

Table 48 presents the main conclusions and recommendations with regards to implementing strategies for each proposed project output

**Table 48:** Strategies for implementing each proposed project output and realizing desired community outcomes.

<b>RECOMMENDATIONS</b> with regards to implementing strategies for proposed project outputs			
<p><b>1. The Project Management Framework</b> should provide a combined “bottom-up and top-down” project delivery mechanism that bridges the gap between the project’s external and local level stakeholders. The CBM network has potential to provide community liaison and communication services.</p>	<p><b>2. Community Resource Centres</b> should increase village resident access to Information, communication and extension services. Each centre should be equipped with attractive and appropriate tools and technologies for local CBMs (i.e. village based extension officers) to manage and share.</p>	<p><b>3. Finance Support Services</b> should reduce financial constraints for feasible income generation enterprises along the track; providing communities with project funding in a way that combines community ownership and commitment with small business training and support.</p>	<p><b>4. Transport Support Services</b> should reduce market access constraints for feasible agricultural enterprises in Area 2; probably involving farmers from one location supplying a single market in Port Moresby in a way that combines community organisation and commitment with business training and support.</p>
<ul style="list-style-type: none"> <li>• <b>Group workshops and meetings</b> (high cost) are needed during project planning activities to ensure project partners and landowners are committed to the project and understand how it will be delivered.</li> <li>• <b>Group discussions and site visits</b> (quite high cost) are needed to ensure the project’s annual work programmes are coordinated, implemented and monitored in a cost effective manner.</li> <li>• <b>VHF radio</b> (moderate cost) is needed to maintain regular dialogue with CBMs during project implementation and monitoring.</li> <li>• <b>Phone</b> (quite low cost) and <b>internet</b> (low cost) should be used to maintain dialogue with off-track project partners and the tourism, agricultural and PES sectors.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Visitors including trekkers, tour operators, volunteers and successful local entrepreneurs</b> (low cost) can provide on-site specialist training services.</li> <li>• <b>Electronic resources</b> (low-cost) including PowerPoint presentations and videos can provide on-site awareness and training sessions.</li> <li>• <b>Physical resources</b> (quite low cost) including booklets and pamphlets can provide on-site awareness and training materials.</li> <li>• <b>Community based mentors</b> (quite low-moderate cost) can provide ongoing, on-site extension services on priority topics using Resource Centre tools and equipment.</li> <li>• <b>Specialist external trainers</b> (moderate cost) can train CBMs (or other local trainers), as well as assist on-site when a greater depth of knowledge is needed.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Option 1</b> (good potential) is for small business finance to be outsourced to an existing finance scheme in Port Moresby.</li> <li>• <b>Option 2</b> (good potential) is for small business finance to be managed by KTA.</li> <li>• <b>Option 3</b> (moderate potential) is for small business finance to be managed by the two district administrations with support from KTA.</li> <li>• <b>Option 4</b> (moderate potential) is for small business finance to be managed by the two local level administrations with support from KTA.</li> <li>• <b>Option 5</b> (moderate potential) is for small business finance to be managed by each ward along the KT with support from KTA.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Option 1</b> (good potential) relates to the provision of airfare subsidies for approved livelihoods activities as they arise. This arrangement would assist selected farmers / farmer groups to meet their customer’s supply requirements.</li> <li>• <b>Option 2</b> (moderate potential) relates to the provision of airfare subsidies for approved livelihoods activities on certain flights (e.g. one flight per week or backloads on tour operator charters). This arrangement would give farmers less flexibility to meet their customer’s supply requirements.</li> <li>• <b>Option 3</b> (quite low potential) is to provide airfare subsidies for all flights to/from approved locations. This arrangement would also give farmers less flexibility to meet their customer’s supply requirements.</li> </ul>

### 6.2.3 Cross Cutting Issues

Table 49 presents the main conclusions and recommendations with regards to responding to cross cutting issues during project implementation.

**Table 49:** Cross cutting issues and recommendations for future livelihoods activities.

<b>RECOMMENDATIONS</b> with regards to responding to cross cutting issues		
<p><b>1. Climate Change</b> has the potential to undermine rural livelihoods in many parts of PNG through sea level rise, temperature increases, higher rainfall and possibly more extreme climatic events. Whilst the effects of climate change in PNG have been small so far, there is no reason for the Livelihoods Project to be complacent.</p>	<p><b>2. Social Issues</b> should be alleviated through improved access to income generation services and opportunities. However, tourism activities along the track are also producing unintended and undesirable effects within participating households, villages and the wider community. The Livelihoods Project should not be complacent with regards to unplanned social issues.</p>	<p><b>3. Political trends</b> usually influence sustainable forest management practices. Forest governance involves local, national, regional and global structures and processes, which implies that forest management decision-making is usually complex, and prone to misunderstanding and disagreement. The Livelihoods Project should not be complacent with regards to political trends.</p>
<p>1.1 Establish a participatory monitoring framework that includes data for measuring and responding to environmental indicators.</p> <p>1.2 Raise awareness (but not expectations) with regards to the causes and effects of climate change through Community Resource Centres and the CBM extension network).</p> <p>1.3 Collaborate with NARI with regards to adapting to the effects of climate change along the track (e.g. drought tolerant crops).</p> <p>1.4 Collaborate with DEC, PNGFA and OCCD with regards to mitigating against the causes of climate change (e.g. forest protection and reforestation)</p> <p>1.5 Secure funding and technical support for specific projects (e.g. ACIAR and ITTO).</p>	<p>2.1 Establish a participatory monitoring framework that includes data for measuring and responding to positive and negative socio-economic indicators.</p> <p>2.2 Engage and strengthen influential social networks along the track (e.g. Kokoda Women’s Group).</p> <p>2.3 Engage influential local level structures and decision-making processes (e.g. ward development committees and church agencies).</p> <p>2.4 Engage influential external structures and social development programs (e.g. SDA church, KDP, District Government, Provincial Divisions of Health and Community Development).</p> <p>2.5 Promote positive community lifestyles (e.g. through Community Resource Centres and the CBM extension network).</p>	<p>3.1 Establish a participatory monitoring framework that includes data for measuring and responding to political and institutional support indicators.</p> <p>3.2 Involve Australian National Government through DOTE and KI.</p> <p>3.3 Involve PNG National Government through District and Regional Members.</p> <p>3.4 Involve Provincial, District and LLG members through Ward Councillors.</p>



## 7. What Next?

Livelihoods Project activities to-date have had a restricted scope; focusing more on delivering one-off training sessions and income generation projects than on creating an “enabling environment” for the future. This top-down approach has had limited success. The scoping study findings suggest the project scope be considerably broadened; allowing a combined “bottom-up and top-down” project delivery mechanism that focuses on business development needs and market opportunities. This means the scoping study has laid the foundations for a project design process; rather than completed a cost-benefit analysis for future trainings and income generation projects. Figure 92 outlines the scoping study’s 4 recommended steps for completing the project design phase using a participatory, step-by-step approach that further engages landowners, key stakeholders and industry representatives, leading to:

- **An acceptable and realistic work programme** for diversifying local enterprises and enhancing food security, tourism opportunities and forest conservation within the Kokoda Track area;
- **A team of well-connected project partners** who are committed to collaborate on future livelihoods activities.

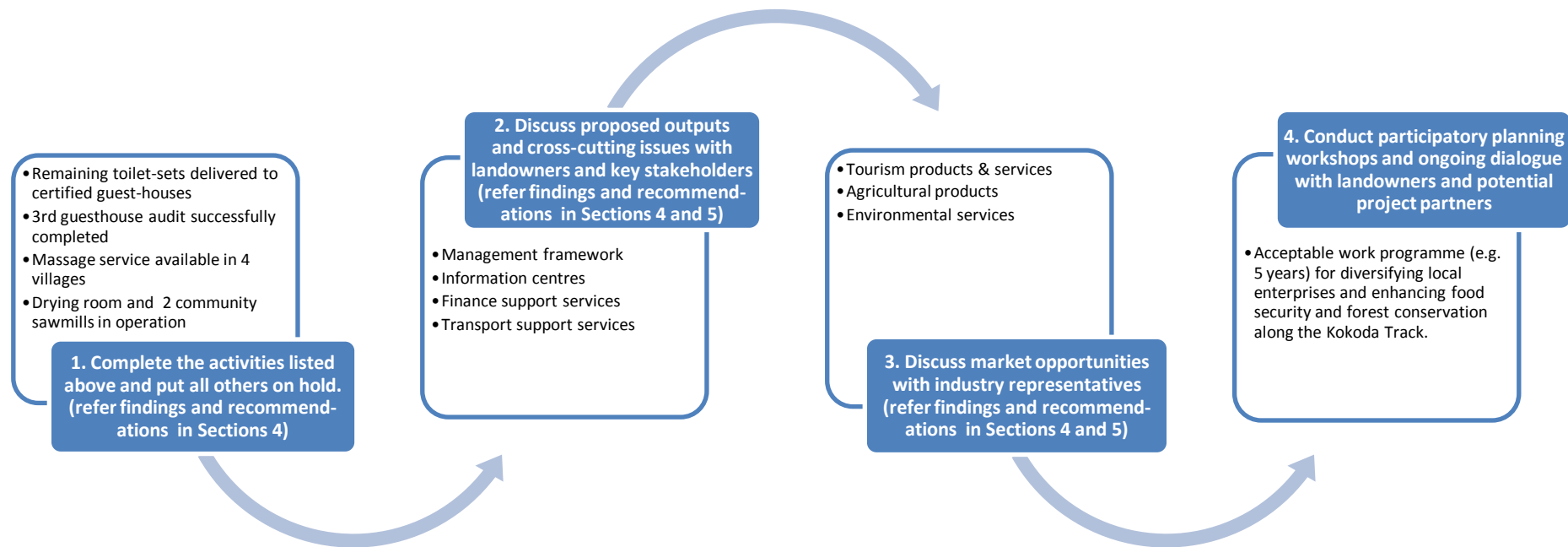


Figure 92: Recommended next steps for completing the design of the KTA Livelihoods Programme





## 8. References

- AusAID. 2006. *Pacific 2020 Review*. Canberra. Australian Agency for International Development, Canberra, Australia.
- Bourke and Harwood. 2009. *Food and Agriculture in Papua New Guinea*. The Australian National University, Canberra, Australia.
- Brooks. 1996. *Small Business Development in Papua New Guinea: Lessons*. PNG Biodiversity Conservation and Resource Management Programme, Department of Environment and Conservation / United Nations Development Programme. PNG.
- Chapman, R., Slaymaker, T. and Young, J. 2003. *Livelihoods Approaches to Resource and Communication in Support of Rural Poverty Elimination and Food Security*. Overseas Development Institute, London, UK.
- Feinberg, J. 2013. *Wordle*. <http://www.wordle.net>
- Chester. 2012. *Kokoda Track Authority: Guesthouse Certification Manual*.
- Chester. 2013. *Kokoda Track Guesthouse Audit Report 2013*.
- CIFOR. 2013. *Forests and governance programme*. Retrieved 11 December, 2013, from <http://www.cifor.org/about-us/how-we-work/forests-and-governance-programme.html>
- Curry, G. 2005. *Doing "Business" in Papua New Guinea: The Social Embeddedness of Small Business Enterprises*. *Journal of Small Business and Entrepreneurship* 18, no 2 (Spring 2005): pp. 231–246
- DFID. 1999. *Sustainable Livelihoods Guidance Sheets: Section 2*. Department for International Development, London, UK.
- Hanson, L.W., Allen, B.J., Bourke, R.M. and McCarthy, T.J. 2001. *Papua New Guinea Rural Development Handbook*. The Australian National University, Canberra, Australia.
- Hart, T., Burgess, R. and Hart, C. 2006. *A participatory project management cycle: can it add value to agricultural development?* *South African Journal of Agricultural Extension* Vol. 34(2) 2005: 201-220.
- IFAD. 2001. *Participatory Approaches for an Impact-Oriented Project Cycle*. International Fund for Agricultural Development, Rome, Italy.
- IFC. 2007. *Draft Report: Kokoda Track Sustainable Development Plan Scoping Study*. International Finance Corporation, Private Enterprise Partnership for the Pacific.
- IIED. 2013. *Markets and payments for environmental services*. Retrieved 11 December, 2013, from <http://www.iied.org/markets-payments-for-environmental-services>.
- KI. 2012. *Kokoda Initiative Annual Report 2011-2012*. Commonwealth of Australia.

KI. 2013. Kokoda Initiative Annual Report 2012-2013. Commonwealth of Australia.

TPA. 2006. *Final Report: Papua New Guinea Tourism Sector Review and Master Plan (2007-2017)*. Tourism Promotion Authority.

Wearing, S., Grabowski, S., Chatterton, T. and Ponting, J. 2009. *Participatory planning for eco-trekking*. The Australian National University, Pacific Economic Bulletin Volume 24 Number 3.

Wikipedia. 2013. *Trans-New Guinea Languages*. Retrieved 11 December, 2013, from [http://en.wikipedia.org/wiki/Trans%E2%80%93New\\_Guinea\\_languages](http://en.wikipedia.org/wiki/Trans%E2%80%93New_Guinea_languages).

Wunder, S. 2005. *Payments for Environmental Services: Some nuts and bolts*. CIFOR Occasional Paper No. 42 Center for International Forestry Research. Bogor, Indonesia.

## 9. Annex

### 9.1. Terms of Reference

#### SCOPING STUDY REVIEW AND RECOMMENDATIONS FOR FUTURE LIVELIHOODS ACTIVITIES

##### *Terms of Reference*

##### **Background**

Kokoda Track Authority is a Special Purposes Authority of the Kokoda and the Koiari local-level governments. The KTA is commissioned to promote and manage the Kokoda Trail (Track) for tourists, while improving the way of life for communities living along the trail, through funding and development programmes.

The KTA has been delivering the livelihoods project along the Trail since 2010 as part of the joint PNG-Australia Initiative which supports and embarks on sustainable development in the Kokoda Trail region, Owen Stanley Ranges and Brown River Catchment areas.

Since the inception of the livelihoods project from 2010 to 2011, KTA has initiated a variety of activities aimed at increasing income-generating opportunities and capacity building of the local communities.

The KTA wishes to conduct a formal review of the project and develop a workable strategy for continued project implementation to ensure it is sustainable, successful, robust and builds on lessons learnt.

Importantly, stakeholders and Kokoda Track communities need to be involved in this scoping study in order to both provide an accurate idea of and to better understand the opportunities and constraints of their income generating environment. It will also be important to consider elements such as gender, social customs and location throughout the review and scoping study process.

##### **Aim**

The Livelihoods project aims to increase the capacity of Kokoda Track communities to generate income from tourism by adding value to the trekking experience.

##### **Objectives**

As indicated in the request for quotation, the scoping study will require the successful service provider(s) to:

- evaluate the previous design and implementation of Livelihoods Program since its inception in 2011 against its objectives;
- present KTA with a set of clear, feasible and empirical recommendations (at the project design, delivery mechanism and activity levels) to enable delivery of a successful and sustainable livelihoods project that would bring services or benefits to local communities and/or trekkers, and;



**Deliverables**

It is an important element of the Study that the consultants will draw on their expertise to survey and review certain literature and undertake extensive consultations with key stakeholders and the Kokoda Trail corridor communities. This will also require the consultants to physically walk the iconic Kokoda Trail.

It is expected that the service provider(s) will:

- i) review projects, including previous and current activities, analyzing what works, what does not and why
- ii) analyze the livelihoods project delivery mechanism, including investigating ways to reduce the administrative requirements of the current arrangement in which a number of discrete activities are delivered annually;
- iii) Investigate community views about the livelihoods project to date and seek community assessment of ways to strengthen future livelihoods projects;
- iv) In consultation with communities and other stakeholders, investigate and recommend possible future activities (including those proposed by the KTA) that have the potential to generate income from the trekking industry;
  - a) undertake a costbenefit analysis of these activities
  - b) estimate resources required to undertake these activities
  - c) recommend which activities should be prioritized, with reference to the capacity and response of the implementing agency
  - d) provide narrative justification for these recommendations, including drawing on consultation with stakeholders and theory of microbusiness in developing countries;
- v) investigate possible opportunities to incorporate income through alternative markets, such as nearby villages;
- vi) identify and analyze opportunities to incorporate greater gender equality, sustainability and monitoring and evaluation into the project;
- vii) identify alignments with the Ward Development Funds paid by KTA to track communities;
- viii) identify possible alignments with provincial/district planning documents;
- ix) identify possible partnerships (and mechanisms to progress these), including with relevant LLG or provincial governments, the Kokoda Development Program and relevant NGOs;
- x) identify gaps in existing knowledge and understanding of operational requirements of livelihoods activities within the KTA.

- xi) provide a written report of the study findings.

### Consultations

The service providers are to consult with key stakeholders (listed below) over the period of study which should include but not limited to;

- Tour Operators
- Tourism Promotions Authority
- Department of Environment and Conservation (DEC)
- Oro Provincial Government
- Central Provincial Government
- Sohe District Administration
- Kokoda Local Level Government
- Hiri District Administration
- Koiari Local Level Government
- Ward Councilors
- Landowner representatives
- Villagers along Kokoda Track corridor
- National Agricultural Research Institute (NARI)
- Kokoda Development Program (KDP)
- NGOs active on the Trail (Track) such as Kokoda Track Foundation and rotary

### Potential Timeline

Proposed Activity	Timeframe
Development of draft methodology and Implementation plan and revision of budget	9 – 18 Sept.
Submission of draft methodology and implementation plan and revised budget to KTA	19 Sept.
Review of draft methodology and implementation plan and revised budget by KTA	20 Sept.
Address reviewed draft plan and revised budget by service providers	23 – 25 Sept.
Re-submission of methodology and Implementation plan and budget to KTA	26 Sept.
Final assessment and acceptance of plan by KTA and Signing of contract	27 Sept.
Study commences	30 Sept.
Two stakeholder consultation progress reports (written or verbal with written follow up)	
Study ends	15 Nov.
Submission of draft Study report	22 Nov.
Review of Study report by KTA	25 – 27 Nov.
Final submission of Study report to KTA	4 Dec.
Acceptance of Study report by KTA	6 Dec.

Period of actual study on and off the Trail will be from 30 September to the 15<sup>th</sup> November, 2013. The field component of the study is expected to take up to three (3) weeks. No work is



required on Saturdays when the service providers are on the Track. Period of study may be extended where and when necessary with prior approval of the KTA.

#### **Outputs**

- Study design and implementation plan, including stakeholder consultation plan and budget
- Two stakeholder consultation progress reports (written reports to be submitted on return to Port Moresby)
- Draft report for approval
- Final report including Executive Summary and Appendix

#### **Payment Schedule**

Service provider pay arrangement:

- 30% upon acceptance of review implementation plan
- 30% upon acceptance by KTA of draft report
- 40% on acceptance by KTA of final report

The KTA will organize accommodation, catering, service providers' assistants and travel.

Any additional payment to the service providers will have to be approved by the KTA prior to incurring expenses not covered by the payment schedule.

#### **Contact Information**

For further information, please contact the Kokoda Track Authority office on telephone: 323 6165.

Livelihoods Officer    Hollen Mado  
Email:                    [livelihoods@kokodatrackauthority.org](mailto:livelihoods@kokodatrackauthority.org)

Project Manager        RapseyRapanaVagi  
Email:                    [projects@kokodatrackauthority.org](mailto:projects@kokodatrackauthority.org)

Office Address:        Brian Bell Plaza  
                                  Level 2  
                                  Boroko  
                                  National Capital District

## 9.2. Framework Document v.5

Attached separately

### **9.3. Survey Guidelines**

Attached separately

## 9.4. Survey Participants (Central Province)

Date	Participant Type	Village	Name	Position
29-Oct-13	Government	Kagi	Clement Deia	
29-Oct-13	Government	Kagi	Gibson Kemori	Teacher
29-Oct-13	Village resident	Kagi	Havala Laula	
29-Oct-13	Village resident	Kagi	Isaac Matama	
29-Oct-13	Village resident	Kagi	Peter Kemori	
29-Oct-13	Councillor	Ward 15	Arthur Danny	Councillor
29-Oct-13	Village resident	Ward 15	Rakz Gorua	Village magistrate
29-Oct-13	Village resident	Ward 15	Robert Bamawe	Ward development committee
30-Oct-13	Village resident	Kagi	Alex Nana	Youth representative
30-Oct-13	Tourism employee	Kagi	Clement	Tour guide
30-Oct-13	Village resident	Kagi	Felda Heni	Youth representative
30-Oct-13	Village resident	Kagi	Gai Amuri	
30-Oct-13	Village resident	Kagi	Solence Simon	Youth representative
30-Oct-13	Village resident	Kagi	Stephanie Dadli	Youth representative
30-Oct-13	Village resident	Kagi	Taksen Kemori	Youth representative
30-Oct-13	Village resident	Kagi	Tracy Havala	Women's leader
30-Oct-13	Village resident	Kagi	Women's Group (8)	
31-Oct-13	Tourism employee	Efogi	Paul, Amo, Peter	Porters
31-Oct-13	Village resident	Naduri	Alan Gubale	Youth representative
31-Oct-13	Village resident	Naduri	Brian Gadai	Youth representative
31-Oct-13	KTA field worker	Naduri	Edna Wesley	Mentor
31-Oct-13	Village resident	Naduri	Joe Joel	Youth representative
31-Oct-13	Tourism entrepreneur; KTA employee	Naduri	Joel Oreki	Mentor; Guest house owner
31-Oct-13	Village resident	Naduri	John Galebe	Village leader
31-Oct-13	Village resident	Naduri	Sullivan Sikai	Youth representative
31-Oct-13	Village resident	Naduri	Vavela Siga	Village elder
31-Oct-13	Village resident	Naduri	Women's Group (15)	
1-Nov-13	Tourism employee	Efogi	Gerard	Tour guide
1-Nov-13	Village resident	Efogi	Joel	Church leader
1-Nov-13	Village resident	Efogi	Steven	Pastor
1-Nov-13	Tourism employee	Efogi	Kaisen Freddy	Porter
1-Nov-13	Village resident	Efogi	Kovave	Retired Pastor
1-Nov-13	Village resident	Efogi	Anisi Osis	

Date	Participant Type	Village	Name	Position
1-Nov-13	Village resident	Efogi	Kaili Bokoi	
1-Nov-13	Village resident	Efogi	Laini Soba	
1-Nov-13	Village resident	Efogi	Mado	
1-Nov-13	Tourism entrepreneur	Efogi	Marlon Koagi	Guest house manager
1-Nov-13	Government	Efogi	Maxford Barnabas	School principle
1-Nov-13	Village resident	Efogi	Solence Enage	
2-Nov-13	KTA field worker	Efogi	Batz Batia	Mentor
2-Nov-13	KTA field worker	Efogi	Janet Elodo	Mentor
3-Nov-13	Village resident	Manari	Bagoi Aubi	
3-Nov-13	Government	Manari	Dinima Raga	Health Officer
3-Nov-13	Village resident	Manari	Edna Gereva	
3-Nov-13	KTA field worker	Manari	Elijah	Ranger
3-Nov-13	Village resident	Manari	Joe Matama	
3-Nov-13	Village resident	Manari	Junior	
3-Nov-13	Tourism entrepreneur	Manari	Junior Gibson	Guest house owner
3-Nov-13	Village resident	Manari	Keipi Vaberi	
3-Nov-13	Village resident	Manari	Moses Mado	
3-Nov-13	Village resident	Manari	Naoi Alai	
3-Nov-13	Village resident	Manari	Nathan Nibaba	
3-Nov-13	KTA field worker	Manari	Nick Lida	Porter
3-Nov-13	Village resident	Manari	Taba Nick	
3-Nov-13	Village resident	Manari	Varoi Dumu	
3-Nov-13	Tourism entrepreneur	Manari	Wakson Vagigi	Guest house owner
3-Nov-13	Village resident	Manari	Wendi	
3-Nov-13	Village resident	Manari	Women's Group (30)	
3-Nov-13	Village resident	Manari	Youth Group (30)	
4-Nov-13	KTA field worker; Touris	Efogi	Stanley Enage	Mentor; Guest house owner
4-Nov-13	Village resident	Manari	Elizah Peter	
4-Nov-13	KTA field worker	Manari	Joy Elizah	Mentor
5-Nov-13	Tourism employee	Kagi	Jeffrey Aluhi	Porter
5-Nov-13	Village resident	Kagi	Men's Group (8)	
5-Nov-13	Tourism employee	Kagi	Russel Sibolo	Porter
5-Nov-13	Tourism employee	Maraba	Fred Salei	Porter
5-Nov-13	Village resident	Naoro 2	Morea Biloi	Village Magistrate

Date	Participant Type	Village	Name	Position
5-Nov-13	Village resident	Nauro 2	Gideon	Ward Liason Officer
5-Nov-13	Village resident	Nauro 2	Jack	Assistant church elder
5-Nov-13	Village resident	Nauro 2	Men's Group (15)	
5-Nov-13	Village resident	Nauro 2	Porter's Group (9)	
5-Nov-13	KTA field worker	Nauro 2	Rex Dovaka	Mentor
5-Nov-13	Village resident	Nauro 2	Women's Group (18)	
6-Nov-13	Tourism entrepreneur	Ioribaiva	Esko Avu	Guest house owner
6-Nov-13	Tourism entrepreneur	Ofi Creek	Dobo Buai	Guest house owner
16-Nov-13	Trekker	Naduri	Trekker group (22)	
3-Dec-13	Tourism employee	Depo	Joel Norman	
3-Dec-13	Village resident	Vesulogo	Cathy	
3-Dec-13	Tourism employee	Vesulogo	Dick Noel	
3-Dec-13	Village resident	Vesulogo	Elsie Iori	
3-Dec-13	Councillor	Vesulogo	Helen Weana	Councillor
3-Dec-13	Village resident	Vesulogo	Simon Yawana	
3-Dec-13	Village resident	Vesulogo	Women's Group (6)	



## 9.5. Survey Participants (Oro Province)

Date	Participant Type	Village	Name	Position
29-Oct-13	Councillor	Ward 1	Anthony Tama	Councillor
29-Oct-13	Councillor	Ward 2	Lance Lovi	Councillor
29-Oct-13	Councillor	Ward 3	Alex Manga	Councillor
29-Oct-13	Councillor	Ward 4	Cecil King Sombiro	Councillor
29-Oct-13	Councillor	Ward 5	Cornwel Barai	Councillor
29-Oct-13	Councillor	Ward 6	John Irua	Councillor
29-Oct-13	Councillor	Ward 7	Paul Esiko	Councillor
29-Oct-13	Councillor	Ward 8	Somige Lahu	Councillor
29-Oct-13	Councillor	Ward 9	Peter Badou	Councillor
29-Oct-13	Councillor	Ward 10	David Masuru	Councillor
29-Oct-13	Councillor	Ward 11	Dick Suma	Councillor; Vice-president
29-Oct-13	Councillor	Ward 12	Isikel Orotu	Councillor
29-Oct-13	Councillor	Ward 13	Timothy Sare	Councillor
29-Oct-13	Councillor	Ward 14	Johnson Hembae	Councillor
29-Oct-13	Councillor	Ward 15	Cyprian Vuvu	Councillor
29-Oct-13	Councillor	Ward 16	Morgan Harika	Councillor
29-Oct-13	Councillor	Ward 17	Michael Arua	Councillor
29-Oct-13	Councillor	Ward 18	Willie Pinga	Councillor
29-Oct-13	Councillor	Ward 19	Robert Avu	Councillor
29-Oct-13	Councillor	Ward 20	Alban Tove	Councillor
29-Oct-13	Councillor	Ward 21	Rex Kotave	Councillor
29-Oct-13	Councillor	Ward 22	Isaac Isurai	Councillor
29-Oct-13	Councillor	Ward 23	Wilson Warumu	Councillor
29-Oct-13	Councillor	Ward 24	Jacob Suma	Councillor
29-Oct-13	Government		Jackson Iriri	President, Kokoda LLG
29-Oct-13	Government		Terence Baurima	Manager, Kokoda LLG
29-Oct-13	Village resident	Wards 1-10	Susan Jinga	Women's Rep, (Wards 1-10)
29-Oct-13	Village resident	Wards 11-24	Jill Kerahu	Women's Rep. (Wards 11-24)
31-Oct-13	Village resident	Various Wards	Youth Group (20)	
31-Oct-13	Trekker	Kokoda	Trekker Group (20)	
01-Nov-13	Village resident	Savaya	Men's Group (23)	
01-Nov-13	Village resident	Savaya	Women's Group (14)	
01-Nov-13	Village resident	Oya Guba	Combined Group (20)	

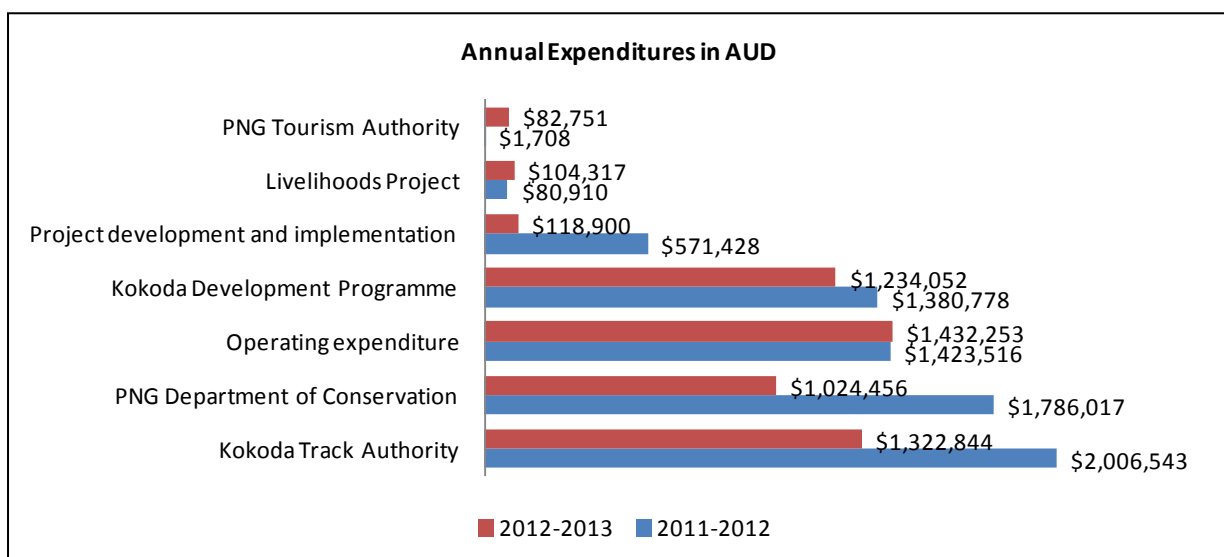
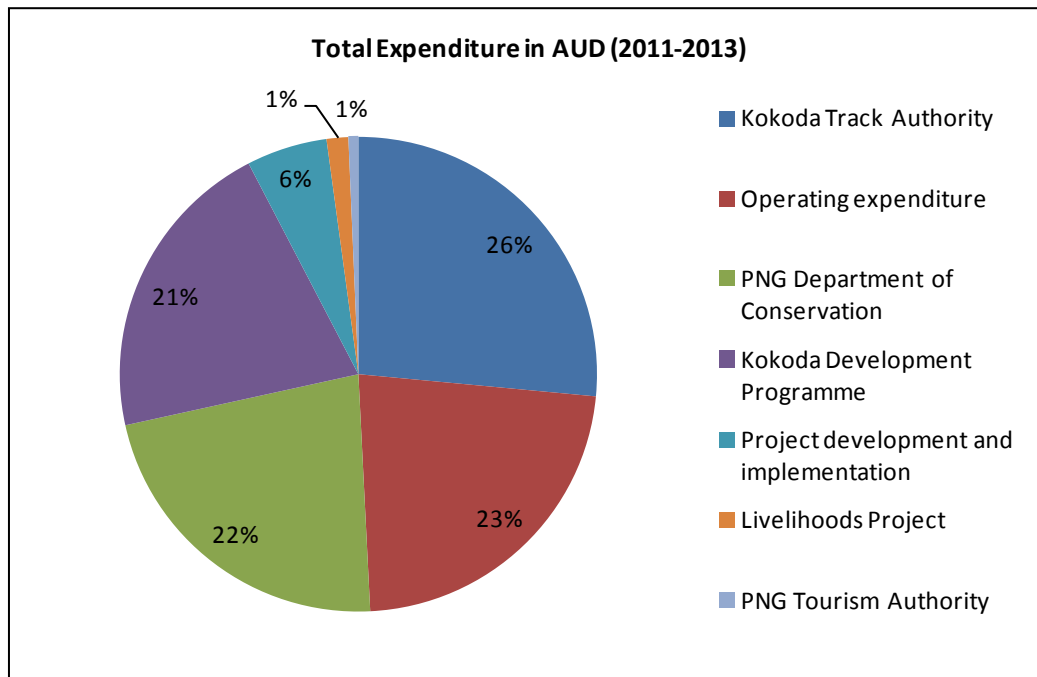
Date	Participant Type	Village	Name	Position
3-Nov-13	Government	Kokoda	Dr. Barry Reed	Volunteer Dental Health Advisor, KTA
3-Nov-13	Tourism employee		Silva Elodo	
3-Nov-13	Tourism employee		Andy Adole	
3-Nov-13	Tourism employee	Kokoda	Ken Harike	
03-Nov-13	Village resident	Kokoda	Women's Group (8)	
4-Nov-13	Village resident	Kovelo	Annie Toroi	
4-Nov-13	Village resident	Kovelo	Women's Group (10)	
4-Nov-13	Village resident	Kovelo	Men's Group (39)	
04-Nov-13	Village resident	Alola	Youth Group (10)	
6-Nov-13	KTA Field Worker	Isurava	Ivan Nitua	Ranger
6-Nov-13	Tourism entrepreneur	Isurava	Obudi Luvula	
6-Nov-13	Tourism entrepreneur	Ward 5	John Sanana	
7-Nov-13	Tourism employee	Kovelo	Mack Dogg	
8-Nov-13	Tourism employee		Trevor Jinga	
8-Nov-13	Tourism employee		Vico John	
8-Nov-13	Tourism employee	Kokoda	Thaddeus	
11-Nov-13	Tourism entrepreneur	Abuari	Nathan Lovei	
28-Nov-13	Government		Tako Gwae	Deputy Provincial Administrator-Field Services
29-Nov-13	Government		Ogi David	President, Koiari LLG
10-Jan-14	Village resident	Alola	Rosie Nave	Teacher (KDP)
10-Jan-14	Village resident	Isurava	Ivan Nitua	Former village councillor

## 9.6. Survey Participants (Other)

Date	Participant Type	Town	Name	Position / Organisation
Nov-13	Government	Port Moresby	Mark Nizette	Advisor, Kokoda Initiative
20-Nov-13	Non-government	Sogeri	Warren Bartlett	Network Kokoda
28-Nov-13	Government	Port Moresby	Vicki Assenheim	Health Advisor, KDP
29-Nov-13	Government	Port Moresby	Alcinda Trawen	Director, Policy and Planning, TPA
29-Nov-13	Government	Port Moresby	Heni Dembis	Planning and Development Officer, TPA
11-Dec-13	Tour operator	Australia	Terry Hewett	Adventure Out Australia
11-Dec-13	Tour operator	Port Moresby	Pam Christie	PNG Trekking Adventures
12-Dec-13	Tour operator	Australia	Frank Taylor	Kokoda Treks & Tours
16-Dec-13	Tour operator	Australia	Sue Fitcher	Getaway Trekking and Adventures
18-Dec-13	Government	Port Moresby	Clifton Gwabu	Research Development Co-ordinator, NARI, Laloki
18-Dec-13	Government	Port Moresby	Paul Osilis	Research Associate, NARI, Laloki
25-Feb-14	Government	Port Moresby	Gei Raga	Administrator, Central Province

## 9.7. Kokoda Initiative Expenditures

Budget categories and figures are sourced from the Kokoda Initiative’s Annual Reports (2011-2012 and 2012-2013) and the Livelihoods Project’s Expenditure Sheet (2011-2013).



## 9.8. Livelihood Project Expenditures

Budget categories and figures are sourced from the Livelihoods Project's Expenditure Sheet (2011-2013).

**BUDGET SUMMARY (2011-2012)**

Activity	Description	Budget	Spent to Date	Funds Remaining	% Unspent	% Completed
1	Skills Training	\$13,800	\$13,001	\$799	6%	Transferred to 2012-2013)
2	Community Based Mentors	\$16,500	\$4,176	\$12,324	75%	Transferred to 2012-2013)
3	Drying Room	\$4,400	\$3,418	\$982	22%	60%
4	Industry Skills Training	\$35,000	\$15,435	\$19,565	56%	30%
5	Milled Timber Project	\$15,000	\$12,170	\$2,830	19%	Transferred to 2012-2013)
6	Project Management	\$38,600	\$32,710	\$5,890	15%	
9	Guesthouse Certification					Transferred to 2012-2013)
	<b>Total funding 2011/12</b>	<b>\$123,300</b>	<b>\$80,910</b>	<b>\$42,390</b>	<b>32%</b>	<b>45%</b>

**BUDGET SUMMARY (2012-2013)**

Activity	Description	Budget	Spent to Date	Funds Remaining	% Unspent	% Completed
1	Project Management	\$30,713	\$12,462	\$18,251	59%	
2	Scoping Study and Review	\$13,850	\$14,503	-\$653	-5%	100%
3	Business Training and Improvements	\$24,030	\$41,192	-\$17,162	-71%	38%
4	Technical Skills Training	\$14,400	\$6,962	\$7,438	52%	38%
5	Community Based Mentors	\$26,100	\$6,698	\$19,402	74%	10%
	Reserved	\$35,907	\$22,500	\$13,407	37%	
	<b>Total funding 2012/13</b>	<b>\$145,000</b>	<b>\$104,317</b>	<b>\$40,683</b>	<b>24%</b>	<b>47%</b>

**9.9. Livelihoods / Micro-business Support Project: Evaluation report  
(2011)**

Attached separately