

**Conservation, livelihoods and the role of tourism:
a case study of Sukau village in the
Lower Kinabatangan District, Sabah, Malaysia.**

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Charlotte Jane Fletcher**

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Abstract

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Conservation, livelihoods and the role of tourism: a case study of Sukau village in the Lower Kinabatangan District, Sabah, Malaysia.

By C.J. Fletcher

The purpose of this study was to examine conservation, livelihoods, and the role of tourism. The village of Sukau in the Kinabatangan District of Sabah, Malaysia, served as a case study.

The vital importance of the Lower Kinabatangan in wildlife conservation, coupled with the tourism potential of the region, underpinned the creation of the Kinabatangan Wildlife Sanctuary in 2005. The 26,000 hectare sanctuary is fragmented in nature and surrounded by palm oil plantations. Still, with the protection of these fragmented forested areas, Sukau has evolved into the 'hub' of tourism in the Lower Kinabatangan. The majority of visitors come to Sukau for the opportunity to view the flagship species of the Kinabatangan Wildlife Sanctuary (orang-utan, Bornean pygmy elephant, proboscis monkey, and hornbills) in the wild.

Many of the local villagers own land which is still forested and serves as important ecological links between the fragmented protected areas. However many of the villagers plan to use their lands for smallholder palm oil farming in the future. This will further fragment the forested areas of the Wildlife Sanctuary, and will have severe implications for nature conservation and tourism in Sukau. The Sabah Tourism Master Plan (1996) stresses that for the tourism-conservation linkage to be effective in Sukau, the local community must benefit from tourism. If the locals of Sukau are able to depend on tourism as a livelihood option, then perhaps the forested areas of the Wildlife Sanctuary

will not be further fragmented in the near future. This study will attempt to answer whether tourism is an effective alternative livelihood source for the locals of Sukau.

Predominantly qualitative research methods were used for this study. These included semi-structured interviews with the local villagers of Sukau, and informal interviews with key informants in the area. Structured questionnaires and interviews were also undertaken with lodges in and near the village. The information gathered from these sources was further strengthened by my own personal and participatory observations.

In 2006, 10 per cent of the population of Sukau, and 23 per cent of the estimated total workforce were directly employed in tourism. Results indicate that having tourism as a livelihood option has made the villagers more motivated to protect their environment. Yet the locals of Sukau disagree that their community benefits sufficiently from tourism, and smallholder palm oil farming is viewed as the more lucrative livelihood option.

The current financial crisis (2008-9) has complicated the likely contribution of tourism to livelihoods and conservation in the future. Nevertheless it is likely that both the palm oil and tourism industries will recover from the economic downturn, and consequently they will both continue to be future livelihood options for the villagers of Sukau. Therefore steps should be made to improve both industries for the benefit of livelihoods and nature conservation in Sukau. There are a number of potential ways in which tourism could be improved in Sukau to bring more benefits to the locals. If these suggested improvements occur, then the effectiveness of tourism as an alternative livelihood source for the locals of Sukau will be enhanced.

Keywords: Malaysia; Sabah; Sukau; Kinabatangan Wildlife Sanctuary; Tourism; Conservation; Livelihoods; Oil palm; Local communities; Home-stay; Wildlife conflicts.

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List of Acronyms

ASEAN	The Association of Southeast Asian Nations
B&B	Bed and Breakfast
DO	District Officer
DPA	Daily Paid Assistant
EUR	Euro
FELDA	Federal Land Development Authority
FFB	Fresh Fruit Bunches
GDP	Gross Domestic Product
GTZ	Gesellschaft für Technische Zusammenarbeit (a German development agency)
HUTAN	French Non-Governmental Organisation
IIED	International Institute for Environment and Development
IT	Information technology
IUCN	International Union for Conservation of Nature
JKK	Jawatankuasa Kemajuan Kampung (Village Development Committee)
KK	Ketua Kampung (Head of Village)
KOCP	Kinabatangan Orang-utan Conservation Project
KWS	Kinabatangan Wildlife Sanctuary
L1	Lodge One
L2	Lodge Two
L3	Lodge Three
L4	Lodge Four
LCC	Land Capability Classification
MDG	Millennium Development Goals
MESCOT	Model Ecologically Sustainable Community Tourism
MOT	Ministry of Tourism
MTED	Ministry of Tourism and Environmental Development
MTUC	Malaysian Trades Union Congress
MYR	Malaysian Ringgit

N/A	Not Applicable
NEP	National Ecotourism Plan
NGO	Non-Governmental Organisation
NZD	New Zealand Dollar
PPMS	Local Community Resettlement Programme
PRA	Participatory Rural Appraisal
RAE	Red Ape Encounters
RM	Ringgit Malaysia
RRA	Rapid Rural Appraisal
RSPO	Roundtable on Sustainable Palm Oil
SAFODA	Sabah Forestry Development Authority
SARS	Severe Acute Respiratory Syndrome
SESB	Sabah Electricity Sdn Bhd
SFD	Sabah Forestry Department
SI	Special Interest Tours
SLA	Sustainable Livelihoods Approach
SLDB	Sabah Land Development Board
SWD	Sabah Wildlife Department
UN	United Nations
UNEP	United Nation's Environment Programme
USD	American (United States) Dollar
VCL	Voluntary Conservation Levy
VJR	Virgin Jungle Reserve
WTTC	World Travel and Tourism Council
WWF	World Wide Fund for Nature

List of Personal Communications

M. Ancrenaz	HUTAN	Co-founder
R. Chong	Kinabatangan Jungle Camp	Owner
M. Donysius	WWF	Senior Programme Officer
J. Majail	WWF	Team Leader
M. Noh	Sukau Primary School	Head teacher
Sahdin	RAE	Manager

1 Introduction

1.1 Reason for the research

The purpose of this study is to examine conservation, livelihoods, and the role of tourism using Sukau village in Sabah, Malaysia, as a case study.

Currently, industrialised agriculture such as palm oil plantations threatens rainforest ecosystems worldwide. These rainforests are of extremely high environmental value (biophysically, culturally, socially, spiritually, and economically). Yet the economic returns from timber harvesting and agriculture are strong incentives for land to be permanently converted from rainforest into agricultural production. The world's remaining rainforests now tend to be located in 'developing' countries where economic development is at the forefront of decision-making. A prime example of where industrialised agriculture is currently threatening remaining rainforest ecosystems is in the Kinabatangan District, Sabah, Malaysia.

The Kinabatangan District was one of the first areas in Sabah to be opened for logging. This intensified when the logging monopoly held by the British North Borneo Timber Company was lifted in 1952, and logging reached its peak in the 1970s and 1980s (Hutton, 2004). With the disappearance of valuable hardwood trees, economic policy favoured the conversion of forest in the Lower Kinabatangan to agriculture. However scientific research consistently produced evidence of the vital importance of the Lower Kinabatangan in wildlife conservation (Hutton, 2004). While large sections of forest continued to be cleared, in 1989 the World Wide Fund for Nature (WWF) proposed to the Sabah State Government that the Lower Kinabatangan should be protected. The WWF proposal was strengthened by a tourism feasibility study of the area which revealed exceptional potential for 'ecotourism' in the Lower Kinabatangan (Payne, 1989; Vaz, 1993). In 1992, the state government acknowledged the need to establish a conservation area along the river and in 2005 the Kinabatangan Wildlife Sanctuary (KWS) was gazetted under the Wildlife Conservation Enactment. The sanctuary consists of blocks of land which link the remaining pockets of forest reserves with the mangrove forests which continue from the

river mouth upriver until the village of Abai. This provides a (currently fragmented) forested corridor along the lower portion of the river (Hutton, 2004).

The wildlife of the Lower Kinabatangan is acknowledged to be the most varied and easily accessible in all of Southeast Asia (Hutton, 2004). Hence the area is regarded as a potential ‘ecotourism hotspot’. The village of Sukau has evolved into the hub of tourism in the Kinabatangan, largely due to its proximity to the Menanggol River¹, Gomantong caves, and increased accessibility by road. The first lodge was built in 1991 and there are now a total of six tourist lodges operating in Sukau. The village also has a home-stay programme, a Bed and Breakfast, and a community-run ‘ecotourism’ project which was developed by the Sabah Wildlife Department and is now overseen by the locally-based French Non-Governmental Organisation (NGO) – HUTAN.

Many ‘developing’ countries still have ‘undeveloped’ areas such as rainforests which contain high levels of biodiversity. Yet the people who live in the vicinity of these ‘undeveloped’ areas are often living in poverty. Tourism is endorsed by NGO’s (such as WWF), the United Nations (UN), and governments of developing countries as an alternative income source from conserving these areas in an ‘undeveloped’ state. This endorsement relies on a number of assumptions:

1. That tourism development will provide income-generating activities that do not degrade or destroy the environment on which it depends.
2. That tourism will provide sufficient returns for communities to improve local livelihoods, reduce resource dependencies, and therefore generate conservation support.
3. That the resulting community-based conservation effort will in turn help to create a healthy environment and resource base for tourism to further develop in a sustainable manner (Schellhorn, 2007).

The integrated conservation-ecotourism model outlined in Figure 1 illustrates this relationship.

¹ Also often referred to as ‘Menanggul’.

Figure removed for copyright compliance

Figure 1. Integrated conservation-ecotourism model. Source: (Schellhorn, 2007, p. 2)

However, these assumptions are not always met by the reality of tourism development. Local communities may not be willing or have the investment capital, know-how or infrastructure necessary to engage tourism as a business and alternative resource use. The income derived from tourism is often not sufficient and sustainable enough to replace other forms of income, and the economic benefits may leak out of the area. Also, the benefits are not usually spread throughout the community; and the tourism activities themselves may not be sustainable and instead be damaging to the environment (Schellhorn, 2007). Scheyvens (2002) suggests that a simplified dichotomy which arises from Pretty, Guijt, Thompson, and Scoones (1995) 'typology of participation' is passive versus active participation (refer Appendix 1). When communities are passive participants in a tourism process they may merely receive a few low-paid jobs at tourist lodges and exert no control over the nature of tourism development in their vicinity or their involvement in it. A preliminary analysis indicates that in Sukau, the tourist lodges are owned and operated by non-locals, and local employment in the lodges is largely restricted to the lower-paid positions. As well as this, poor marketing and promotion may be resulting in few tourists

staying in the village itself. Therefore the benefits of tourism in Sukau may not be adequately distributed, with non-locals benefiting most of all.

Under Sabah's Land Ordinance, local indigenous people are entitled to private tracts of land of up to six hectares; an entitlement which indigenous people from Sukau have taken advantage of. The majority of these private tracts of land are still forested and provide an important ecological link between the fragmented protected areas. Hence private land is currently essential to the success of the Wildlife Sanctuary in terms of sustaining viable breeding populations of wildlife. However these private plots are increasingly being converted into palm oil plantations as this is viewed by the locals as being a lucrative form of income. There are a growing number of 'smallholders' where the palm oil plantation is owned and managed by the local land owner. Another direct threat is the oil palm companies buying land from native title holders to further expand their large-scale plantations.

The locals of Sukau are entitled to gain economic returns from their land. They also want money to live and develop – a 'right' which many westerners now take for granted. Therefore if the biodiversity of the Lower Kinabatangan is to be protected, the residents must have alternative options to improve their livelihoods. Currently, tourism is viewed by government departments and NGOs as the most viable option in the Lower Kinabatangan for retaining forest cover whilst providing livelihood benefits for the locals. If tourism is able to give the locals enough of an incentive (i.e. financial) to retain their land in natural forest then perhaps these forested links will remain.

1.2 Thesis aim and objectives

This study will attempt to answer whether tourism is an effective alternative livelihood source for the locals of Sukau.

Aim:

To assess and evaluate the impacts of tourism on the village of Sukau in the Lower Kinabatangan District, Sabah, Malaysia.

Specific Objectives:

1. Investigate what the community was like prior to tourist lodge development in Sukau.
2. Describe the current level of tourism in Sukau, in terms of types of activities, timing, number of visitors, number of lodges and other facilities, and cash flow into the area.
3. Define the types and extent of tourism impacts on the local people.
 - 3.1 Determine the contribution of tourism to job opportunities and employment for local people.
 - 3.2 Assess the contribution of tourism to infrastructure development such as roads, sanitation, communication, health care facilities and schools.
 - 3.3 Determine the contribution of tourism to environmental awareness and education of local people, and nature conservation in the area.
 - 3.4 Investigate the extent of community participation in tourism in Sukau.
4. Investigate the local community's perceptions of tourism.
5. Investigate the local people's visions for livelihood options and nature conservation in the future.

1.3 Structure of the thesis

This thesis is divided into six chapters. Chapter Two reviews literature on the relationship between conservation, livelihood development, and the role of tourism. Chapter Three introduces the case study area of Sukau in the Lower Kinabatangan District, Sabah, Malaysia. This chapter provides background information on the historical and cultural context of the study area. Chapter Four presents the methodology for the research. This chapter is divided into four distinct sections: preliminary methodology; field validation of methodology; revised methodology; and methodological problems and constraints. Chapter Five presents and discusses the results of the field research in Sukau. In Chapter Six, the research objectives are re-visited and the main findings addressed. This chapter then concludes the thesis with a discussion of practical, as well as research, implications of the study.

2 Conservation, livelihoods, and the role of tourism

Malaysia, not unlike other developing countries, is naturally and culturally rich and diverse. Yet local people in these countries who live in protected areas and their surrounds are often extremely poor. Many developing countries contain 'biodiversity hotspots' - areas considered of high priority with regard to biodiversity. These areas have become the primary focus of international conservation efforts. In 'less developed countries', in particular, these natural resources also provide important income streams and life support for local communities. However in light of economic globalisation, rapidly advancing technologies and spiralling population pressure, this dependency on primary resources has caused environmental degradation in many areas (Christ, Hillel, Matus & Sweeting, 2003, cited in Schellhorn, 2007). There is now a high level of agreement on the need to conserve natural habitats while decreasing poverty by increasing alternative livelihood options.

It is clear that unless local people gain some benefits from the conservation of wildlife and other natural resources on their own or neighbouring land, they will have little incentive to sustainably manage these resources (Schellhorn, 2007; Scheyvens, 2002). This view is summed up in a recent article on the threats of the oil palm industry in Borneo: "Whatever strategies environmentalists pursue to save Borneo's biodiversity must first offer ways for its residents to improve their lives" (White, 2008, p. 44).

The focus of this chapter will be to review literature on the relationship between conservation, livelihood development, and the role of tourism. The first section outlines the current conservation issues in Sabah. Some approaches to nature conservation are then summarised – namely ecosystem management, species diversity, genetic diversity, and ecosystem health. The third section then discusses tourism; including Butler's (2006) hypothetical evolution of a tourist area and the emergence of nature-based and ecotourism as 'more sustainable' forms of tourism. This is followed by sections which discuss the relationships between tourism and conservation, tourism and development, and development and conservation. Current approaches for achieving development and conservation goals are then presented, with a focus on the Sustainable Livelihoods Approach (SLA). This is followed by a section which outlines the issues surrounding local

participation in conservation and development projects. An overview of criticisms of the use of tourism for achieving conservation and development goals concludes the chapter.

2.1 Conservation issues in Sabah

The World Conservation Strategy defines conservation as “the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations” (IUCN, 1980, p. 1).

Borneo (including Sabah) has a highly rich and diverse fauna and flora, and is one of the world’s ‘hotspots of biodiversity’ (Conservation International, 2009; Goudie, 2006). However this rich and diverse fauna and flora is currently under threat. The primary cause of this is deforestation (Juin, Yangkat, & Laugesen, 2000).

Apart from the direct loss of flora and subsequent loss of fauna due to habitat loss, deforestation also causes other forms of environmental degradation such as soil deterioration, accelerated erosion, increased sedimentation, flooding, and loss of water quality (Cleary & Eaton, 1992; Juin et al., 2000). In addition to commercial logging, shifting cultivation, conversion to mono-agriculture, land development projects, and forest fires have been major causes of deforestation in Sabah (Cleary & Eaton, 1992; Goudie, 2006; Juin et al., 2000).

Alongside deforestation, other changes to the environment have also had adverse effects on Sabah’s biodiversity. An increasing human population and the transition from subsistence to monetary economies have both led to greater pressure on resources. New technologies have made these resources more accessible and easier to exploit. Also the illegal collection and trade of rare animals and plants have been made easier by increased road networks for logging and agriculture (Cleary & Eaton, 1992; Juin et al., 2000).

The balance between development and conservation has become a crucial issue in Sabah. Concern for the tropical rainforest and belated recognition of its importance has led to domestic and international criticisms of government policies, especially in relation to commercial logging. In turn, Malaysian politicians have reacted angrily to what they often

regard as outside interference, and have defended policies on natural resource exploitation as being necessary to provide employment and support local and national development (Cleary & Eaton, 1992; Doyle & McEachern, 2008). The irony of these international criticisms is that the Malaysian supply of tropical hardwood timber and production of agricultural products such as palm oil is merely meeting the domestic and international market demand for these products.

Even so, conservation issues now feature much more in the political agenda of Malaysia. There is, however, a significant implementation gap between stated national environmental policies and what actually happens, as local political and business interests still tend to favour rapid resource exploitation (Barbier, 2007; Cleary & Eaton, 1992). Notwithstanding the rate of resource use, in Sabah there has been a substantial increase in the number of protected areas in the last thirty years. However their area, distribution, and degree of protection provided is considered inadequate (Borneo Conservation Trust, 2007; Cleary & Eaton, 1992).

The Malaysian Constitution gives both the Federal and State Government powers to legislate in Sabah (Cleary & Eaton, 1992; Seng, 2007). Although legislation exists for protecting endangered wildlife, there is sometimes uncertainty within government departments as to whose responsibility it is to implement the legislation. For example, while the Wildlife Department is responsible for the Kinabatangan Wildlife Sanctuary, they do not have full jurisdiction over the area as the forest reserves are the responsibility of the Forestry Department. As a consequence, enforcement of the regulations is difficult. As in other developing countries, this problem is compounded by the shortage of specialist field officers to carry out enforcement (Brockelman, Griffiths, Rao, Ruf, & Salafsky, 2002; Cleary & Eaton, 1992).

2.2 Approaches to nature conservation

It is apparent that deforestation and the subsequent loss of habitat for the state's rich biodiversity is currently the most pressing conservation issue in Sabah. Efforts have been made to protect the unique fauna and flora, and protected areas have been created.

Noss (1996, p. 95) states four objectives for regional conservation in order to maintain biodiversity and ecological integrity in perpetuity. They are:

- Represent, in a system of protected areas, all native ecosystem types and several stages across their natural range of variation.
- Maintain ecological and evolutionary processes, such as disturbance regimes, hydrological processes, nutrient cycles, and biotic interactions.
- Maintain viable populations of all native species in natural patterns of abundance and distribution.
- Design and manage the system to be resilient to short-term and long-term environmental change and to maintain the evolutionary potential of lineages.

These objectives for maintaining biodiversity and ecological integrity in perpetuity could be summarised as: ecosystem management; ecosystem health; species diversity; and genetic diversity.

2.2.1 Ecosystem management

Ecosystems are difficult to define, boundaries are fuzzy, and they are complex, dynamic entities that are influenced by surrounding ecosystems (Wilson, 2004). Putting aside total ecosystems as protected areas may be impractical; however some integrated management is needed to ensure viability of species (Tisen, 2004).

The protection of the Kinabatangan Wildlife Sanctuary (KWS) is an example of ecosystem management. It embraces a wider conservation perspective than the species itself by protecting a range of habitat types and considering the needs and aspirations of the local communities. In the Lower Kinabatangan, wildlife often range beyond the boundaries of the KWS and feed on crops. This can be problematic for private landowners, and they often consider these animals to be agricultural pests. This indicates that ecosystem management also needs to occur beyond the boundaries of the KWS.

2.2.2 Ecosystem health

Ecosystems are dynamic functioning systems dominated by ecological and evolutionary processes such as disturbance regimes, hydrological processes, nutrient cycles, and biotic

interactions. However these processes cease when natural areas are fragmented (Goudie, 2006; O'Connor, Overmars, & Ralston, 1990). Habitat fragmentation also divides once continuous, large populations into a number of smaller populations. These smaller populations, when isolated, can result in a number of serious consequences for the viability of the population including genetic drift and inbreeding (Goudie, 2006).

In the Lower Kinabatangan, the 'boom' in palm oil plantations has resulted in habitat loss for the wildlife. This also disrupts elephant migration routes and limits their food sources. As mentioned above, the elephants then feed on the crops of the villagers, hence the availability of food and habitat outside the protected area boundary may require extensive management. This emphasises the need for access between the fragmented protected areas of the Kinabatangan Wildlife Sanctuary in the form of wildlife corridors.

2.2.3 Species diversity

Power et al 1996 (cited in Payton, Fenner, & Lee, 2002, p. 6) defines a keystone species as "a species whose effect is disproportionably large relative to its abundance". In ensuring a viable population of keystone species, the populations of other, less demanding species within the system are also maintained. Therefore it is essential to maintain viable populations of keystone species within protected areas to ensure the viability of ecosystems in the long-term (Halvorson, 1996; Terborgh, 1999). Keystone species in the Lower Kinabatangan include orang-utans, Bornean pygmy elephants, proboscis monkeys, and hornbills. To see these species in the wild is the reason for which the majority of tourists visit the Lower Kinabatangan. Hence they are also considered to be the flagship species of the KWS. Flagship species are chosen to represent an environmental cause, such as an ecosystem in need of conservation. They are selected for traits such as vulnerability, attractiveness or distinctiveness, which are thought will encourage people to support conservation action (Walpole & Leader-Williams, 2002). The species mentioned above are all wide-ranging within the sanctuary and cover a large range of habitat types.

Often it is difficult to establish single protected areas large enough for protecting keystone species. For example WWF proposed that 56,000 hectares be set-aside for the Kinabatangan Wildlife Sanctuary. Instead the protected area is 26,000 hectares in size and

is fragmented in nature. These fragmented protected areas are surrounded by private land (the majority of which is planted in palm oil) and Virgin Jungle Reserves.

2.2.4 Genetic diversity

A minimum viable population of a species means that there are enough plants or animals to allow the population to cope with disease, habitat damage and other periodic disasters (Noss, 1996). It is widely assumed that a breeding population of 500 individuals is the minimum number required to prevent the gradual erosion of genetic variation in the long-term (Lowe, Harris, & Ashton, 2004, p. 55; O'Connor et al., 1990, p. 59; Wilson, 2004, p. 280). Thus the genetic criterion of 500 individuals can be used to determine the minimum size of protected areas required to ensure the viability of species.

Reviewing literature on orang-utan density in the Kinabatangan Wildlife Sanctuary indicated that it is the highest in the world at two orang-utans per square kilometre (Sabah Wildlife Department, 2003, p. 2). Using the genetic criterion of 500 individuals, a protected area of 250 square kilometres would therefore be required to ensure their viability in the long-term. In the 590 square kilometres surrounding, and including, the Kinabatangan Wildlife Sanctuary there are said to be 100 Bornean pygmy elephants (Ambu et al., n.d.). This equates to one elephant per 5.9 square kilometres. Using the genetic criterion of 500 individuals, a protected area of 2,950 square kilometres would thus be required to ensure their viability in the long-term. The KWS is 260 square kilometres (26,000 hectares) in size. Therefore the sanctuary is considered to be sufficient in size to maintain minimum breeding populations of orang-utan. However it is much too small to maintain minimum breeding populations of elephants. Furthermore, due to the fragmented nature of the sanctuary, potential breeding partners may still be isolated from one another. This emphasises the need for corridors which connect the fragmented areas of the KWS as this will allow for breeding amongst all individuals.

Ensuring the long-term survival of these flagship species is crucial for the tourism industry in Sukau.

2.3 Tourism

Tourism is defined as “comprising the activities of persons travelling to, and staying in, places outside their usual environment for not more than one consecutive year for leisure, business and other purposes” (Beaver, 2005, p. 310). In 2005, the travel and tourism economy accounted for 10.6 per cent of world Gross Domestic Product (GDP), and in 2009 is expected to generate US\$5,474 billion of economic activity (World Travel and Tourism Council, 2009). Tourism clearly plays a vital role in the economic development of many nations.

2.3.1 Butler’s tourism development cycle

Butler (2006) stated that “there can be little doubt that tourist areas are dynamic, that they evolve and change over time”. This view is illustrated in Butler’s hypothetical evolution of a tourist area (Figure 2).

Figure removed for copyright compliance

Figure 2. Butler’s hypothetical evolution of a tourist area (Source: Butler, 2006).

The ‘exploration stage’ is characterised by small numbers of tourists, who are non-local, and have been attracted to the area by unique or considerably different natural and cultural features. At this time there are no specific tourist facilities, and tourism has little significance to the economic and social life of the locals. As visitor numbers increase and

become more regular, some local residents will enter the ‘involvement stage’ by providing facilities and services for visitors. The ‘development stage’ reflects a well-defined tourist market area, shaped in part by heavy advertising. As this stage progresses, local involvement and control of development will decline. Those tourist facilities and services provided by locals will be replaced with more elaborate amenities provided by external interests. A wider market will be drawn upon, and the type of tourist which visits the area would have changed. As the ‘consolidation stage’ is entered, the rate of increase in tourist numbers will decline, although total numbers will still increase. As the area enters the ‘stagnation stage’ the peak number of visitors will have been reached. The capacity levels for a number of variables will have been met or exceeded, with associated environmental, social, and economic problems. Post-‘stagnation stage’ the area will enter either a ‘decline stage’ or ‘rejuvenation stage’. This will be determined by a number of factors including alterations to tourist attractions, modification and adjustment to capacity levels, protection of resources, competitiveness with other tourist areas, and the absence or presence of catastrophic events such as war or disease (Butler, 2006).

While this consistent evolution of tourist areas has been recognised by Butler, the shape of the curve must be expected to vary for different areas. This will reflect variations in such factors as rate of development, numbers of visitors, accessibility, government policies, and numbers of similar competing areas (Butler, 2006). The current stage of tourism development in Sukau will be identified in this thesis.

2.3.2 The emergence of nature-based and ecotourism

Although tourism generates employment, income and tax revenue, and acts as a catalyst for regional development, tourism also carries with it the potential to inflict detrimental impacts on host communities and their environments (Hamit, 2003). People have become increasingly aware of the effects of mass tourism on the destination environments. In recent years the need for ‘more sustainable’ forms of tourism has been advocated and increased in popularity. It is now commonly viewed that any form of tourism should not exceed the capacity of the physical and human environment to accommodate it without undergoing serious changes – in other words, it should be sustainable (United Nations World Tourism Organisation, 2009).

Under the broad umbrella of ‘sustainable tourism’, many sub-sectors of alternative tourism have been defined – namely green tourism, geotourism, pro-poor tourism, resource-based tourism, nature tourism, ecotourism, and community-based ecotourism, all of which have been influenced by profound philosophic social and environmental shifts that are all shaped by a change in current value systems (Wearing & Neil, 1999; Weaver, 2008). In recent years there has been a rise of sensitivity to ecological imperatives. It has become ‘fashionable’ and therefore marketable to be participating in ‘green’ or ‘sustainable’ tourism activities. Therefore these ‘more sustainable’ forms of tourism quickly became a marketing tool to attract the growing number of environmentally and socially conscious travellers, and to open new, unexploited destinations (Honey & Stewart, 2002; Weaver, 2008).

2.3.2.1 Nature Tourism

Nature-based tourism is a form of tourism that relies on the natural environment for the basis of its experiences and can include almost any form of outdoor activity that involves a natural element (Ceballos-Lascurain, 1996; Weaver, 2008). Examples are adventure tourism, safari and wildlife tourism, and marine tourism. The environmental responsibility of nature-based tourism extends no further than ensuring that the natural resource continues to be available. Hence it does not require any further experience, education or conservation of the natural environment within which the tourism operates (Honey & Stewart, 2002; Weaver, 2008).

2.3.2.2 Ecotourism

Ecotourism (meaning ecological tourism) is among the fastest growing segments of the travel industry (The International Ecotourism Society, 2009). Travellers, like most of the general public, are becoming sensitive to issues concerning the environment (World Tourism Organisation, 2001). Although ecotourism is a broad term that has been defined in many ways, Hector Ceballos-Lascurain (who coined the term) revised and refined his definition in 1993 to “environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features – both past and present) that promotes conservation, has low visitor impact, and provides for beneficially active socio-economic involvement of local

populations” (Ceballos-Lascurain, 1996, p. 20). The IUCN’s Ecotourism programme officially adopted this definition in 1996. The 1997 Malaysian National Ecotourism Plan also uses this definition to define the term ecotourism in the Malaysian context.

The notion of ecotourism is often confused with the broader concept of sustainable tourism, nature tourism or with certain types of adventure tourism. Honey and Stewart (2002, p. 1) state that nature and adventure tourism focus on what the tourist is seeking. In contrast, ecotourism focuses on what the tourist does and the impact of those activities on both the environment and the local community. Ecotourism requires that these impacts should be positive.

Ecotourism developed within the environmental movement in the 1970s and 1980s, and the travel industry quickly adopted, popularized, mainstreamed and devalued the concept (Honey & Stewart, 2002). The term has been adapted to suit personal interests, and different environmental, socio-economic and cultural circumstances throughout the world have resulted in different definitions of ecotourism. The form of tourism which occurs in Sukau is currently widely marketed and regarded by the lodges as being ecotourism. Yet Wallace (cited in Ceballos-Lascurain, 1996, p. 21) states that ecotourism is only occurring if tourism operators intend to contribute to the long-term protection of the area and local development, and in doing so form partnerships with the local people and protected area managers. Whether the current tourism in Sukau complies with the definitions of ecotourism, and is in fact ecotourism, or is instead using the term as a marketing tool without meeting any additional environmental standards, will be addressed in Chapter Five.

The definition of ecotourism (as refined by Ceballos-Lascurain in 1993) effectively associates tourism, conservation and development as being potentially inter-related. These relationships are discussed below.

2.4 Tourism and conservation

In 1982, Mathieson and Wall noted that “Wildlife and forest reserves have been established and large tracts of scenic land have been preserved partially because of their ability to attract tourists” (Mathieson & Wall, 1982, p. 97). In doing so, “tourism has

provided an impetus for the conservation of natural resources” (Mathieson & Wall, 1982, p. 99). Mathieson and Wall were also aware that tourism can assist conservation more directly than by merely promoting its initiation and continuation. Tourism provides both the incentive for conservation and the economic means by which such measures can be carried out (Mathieson & Wall, 1982). In return, the protection of these prime tourist natural resources enhances and perpetuates tourism by maintaining its very foundation. Because of this, Mathieson and Wall concluded that the tourist industry has as much interest in maintaining a quality environment as those organisations specifically dedicated to that cause (Mathieson & Wall, 1982). These views on tourism and conservation are still relevant now.

The United Nation’s Environment Programme (UNEP) views tourism as a strategic conservation instrument. They state on their website that “as a development tool ecotourism can advance the three basic goals of the Convention on Biological Diversity: (1) conserve biological (and cultural) diversity, by strengthening protected area management systems and increasing the value of sound ecosystems; (2) promote the sustainable use of biodiversity, by generating income, jobs and business opportunities in ecotourism and related business networks, and (3) share the benefits of ecotourism developments equitably with local communities and indigenous people, by obtaining their informed consent and full participation in planning and management of ecotourism businesses” (Schellhorn, 2007, p. 102). The UNEP further claim that “in the field, well-planned and managed ecotourism has proven to be one of the most effective tools for long-term conservation of biodiversity when the right circumstances...are present” (Schellhorn, 2007, p. 105).

The Sabah Tourism Master Plan mentions that tourism development in Sukau offers potential for using the income generated by tourism to help justify conservation. Therefore it is relevant to view tourism as an alternative to the timber industry whose resource base is diminishing (Sabah Tourism Master Plan 1996), and the palm oil industry which is currently flourishing in the Kinabatangan District. Yet the Plan stresses that for the tourism-conservation linkage to be effective in Sukau, significant benefits should accrue to the parties which bear the opportunity costs of conservation. This includes government and the local community (Sabah Tourism Master Plan 1996).

2.5 Tourism and development

Tourism development generates other benefits as secondary effects of conservation. In reviewing literature on tourism and development, it is apparent that tourism is now seen by a number of authors as a way to improve a community's economy by producing new opportunities. Tourism generates employment, provides options for women and unskilled workers, earns foreign exchange and reduces regional economic concerns. Socially, tourism is also seen as assisting in the development and improvement of facilities. Tourism revenue can be channelled for the maintenance of protected areas and generates benefits through improved infrastructure such as roads, telecommunications, and sanitation systems that improve the conditions of the local population (Ceballos-Lascurain, 1996; Neto 2003 cited in Mendoza, 2006).

In September 2000, 189 nations committed themselves at a United Nations (UN) summit meeting to the Millennium Development Declaration. The Declaration specifically calls for halving the number of people who live on less than one dollar a day by the year 2015. The UN Millennium Summit formally adopted eight priority commitments that became known as the Millennium Development Goals (MDG):

1. Eradicate extreme poverty and hunger.
2. Achieve universal primary education.
3. Promote gender equality and empower women.
4. Reduce child mortality.
5. Improve maternal health.
6. Combat HIV/AIDS, malaria, and other significant infectious diseases.
7. Ensure environmental sustainability.
8. Develop a global partnership for development (United Nations Development Programme, 2009).

These MDGs have been endorsed by the United Nations (World Tourism Organisation, 2009), which actively promotes tourism as an “instrument of prosperity, sustainable development and poverty reduction” (Schellhorn, 2007, p. 103).

Through reviewing the literature, it is clear that tourism and poverty alleviation are being increasingly linked. The idea of utilising tourism to eliminate poverty has been embraced by donors, governments, NGOs, conservation organisations and tourism bodies (Scheyvens, 2007a). An increasing number of agencies implement tourism development

projects in developing countries based on a dual strategy of alleviating rural poverty and thereby supporting conservation efforts (Schellhorn, 2007). Governments of developing countries such as Malaysia, support tourism as a development tool because it provides employment, improves balance of payments, boosts foreign exchange earnings and is assumed to support regional development (Schellhorn, 2007).

Although it is identified that tourism can bring with it a myriad of potential pitfalls (refer page 24), tourism can offer considerable potential for bringing appropriate development to local communities (Nowaczek, Moran-Cahusac, & Fennell, 2007; Scheyvens, 2002). Scheyvens (2002, p. 244) stresses that “it is vital to find ways in which tourism can work for development because it is the world’s largest industry and it is continuing to grow, notably in Third World destinations.” Although tourism may not be ‘the’ answer to development problems, because so many local communities in developing countries are keen to be involved in tourism, it may provide assistance in meeting the goals of a number of these communities (Nowaczek et al., 2007; Scheyvens, 2002).

2.6 Development and conservation

Conservation and development thinking have converged, and Butcher (2007) believes that this convergence has developed through events such as the UN Conference on the Human Environment held in Stockholm in 1972, the publication of the World Conservation Strategy (1980), and Our Common Future (1987), the staging of the 1992 UN Conference on Environment and Development in Rio, and the Johannesburg World Summit on Sustainable Development (‘Rio plus ten’) in 2002. The World Conservation Strategy marked a maturation of the environment/development debate. It argued that development could promote conservation, and that, rather than local people paying a price for conservation, they could benefit from it (Butcher, 2007). Our Common Future, published in 1987 is notable in that it was the first time the UN General Assembly had explicitly discussed environment and development as one single problem. The report approaches conservation and development as being inseparable (Butcher, 2007).

However, there are criticisms of combined approaches to conservation and development. Some developing world governments express worries that agreements on the environment would prove to be restrictive to growth and to their freedom to use their natural resources

to best economic effect (Adams 2001 cited in Butcher, 2007). As previously mentioned, Malaysian politicians have defended policies on natural resource exploitation as being necessary to provide employment and support local and national development (Cleary & Eaton, 1992, p. 190). They argue that it is hypocritical to preserve biodiversity in the developing world, when the developed world had become developed precisely by clearing forests and transforming their environments in the course of the development of agriculture and industrialisation (Butcher, 2007). Nowackzek et al. (2007) believes that projects which seek to integrate the interests of conservation and development still tend to place greater emphasis on conservation. This is further supported by Butcher (2006) who states that NGOs continue to fund ecotourism projects not on the basis of their long-term development potential, but principally on the basis of their environmental worth.

2.7 Approaches to development and conservation

Yet projects which address both development and conservation issues have become common-place in developing countries. Since the mid 1980s the approach of 'Integrated Conservation Development Projects' were applied. These projects aimed to foster low-impact forms of economic activity in parks, such as small-scale ecotourism, with the intention of reducing pressure on the natural resources. More often though, such schemes were ineffective for a number of reasons. The number of people affected was tiny in comparison with the scale of welfare needs of the local population. Successful projects acted like a magnet for drawing in would-be beneficiaries from a wider area. The beneficiaries were generally so poor that they treated any income generated as additional to their normal livelihood activities rather than as an alternative. Also the projects were too narrowly situated in villages and ignored the wider societal and economic pressures which were often the cause of protected areas exploitation (Brandon & Wells, 1992; Well et al. 1999 cited in Cochrane, 2007; van Schaik & Rijksen, 2002). Developing from these experiences, the trend for conservation and development projects then shifted to the Sustainable Livelihoods Approach (SLA).

SLA is a tool which provides a theoretical framework to understand the livelihoods of people at a particular site (Chambers et al. cited in Mendoza, 2006). It recognises the need to secure, and develop, people's livelihoods capacities through a diversity of strategies, one of which may be tourism. A livelihoods approach assumes that when people's livelihoods

are secure, they will be less likely to resort to practices which are detrimental to the integrity of the environment (Thomlinson and Getz 1996 cited in Scheyvens, 2002). Hence both the quality of life of people and the conservation of resources are promoted (Chamber and Conway 1992 cited in Scheyvens, 2002).

Although SLA is currently the fashionable approach for assessing conservation and development projects, there are a number of inadequacies in the approach which make it problematic for application in this study. Some of the shortcomings of SLA given the context of the study area are outlined below.

SLA is a people-centred approach and is designed to be participatory. Yet there are a number of difficulties in arranging a genuine level of local participation with those living near protected areas in developing countries. For example, the villagers affected often have low education levels and weak representation within local politics (Cochrane, 2007). Furthermore, Asian (including Malaysian) social and bureaucratic arrangements are characterised by traditional structures of clientism, patronage, hierarchical linkages and respect for authority (Cochrane, 2007, p. 296). These traditional structures tend to be particularly strong in rural areas where protected areas (and most ecotourism) are located. For example an account of development projects in Nepal found that villagers' acceptance of hierarchical structures and personal relations undermined the efforts of Western development planners, whose initiatives were based on cultural values which stressed individuality and equality (Carroll 1992 cited in Cochrane, 2007). Similarly, a study of water systems in southern India found that water management had always been based on political as well as natural principles, and attempts to graft modern participatory ideas onto a strongly hierarchical society resulted in patterns of power play within the communities affected which were as complex as the indigenous systems (Mosse 1995 cited in Cochrane, 2007). These traditional structures also remain strong in Sukau. Such traditional and cultural structures are not incorporated into SLA frameworks (Cahn, 2002). Hence using an SLA framework to assess the effectiveness of tourism as an alternative livelihood source in Sukau would not sufficiently acknowledge these important aspects of the community.

SLA attempts to represent a complex system in a simple and logical way. However in doing so, the relative importance of some factors and the relationships between the factors

are lost (Cahn, 2002). In many parts of Asia (including Malaysia), leaders are highly powerful and the influence of individuals can be strong. Corruption is also accepted as an endemic part of the socio-political scene (Cameron 1996 cited in Cochrane, 2007, p. 298). The transparent and accountable governance which would foster careful management of natural resources is largely missing, with private interests generally prevailing over the public good and poor control over market forces (Cochrane, 2007). SLA undervalues the presence of these factors and the influential relationships between them. These factors conflict with Western ideals, which are ingrained within the concept of SLA.

SLA is designed to work across sectors (Cahn, 2002). Tourism involves a number of government departments including those responsible for agriculture, education, health, water, forests, land use and infrastructural planning and coastal management, as well as tourism (Cochrane, 2007). Yet most government institutions and organisations are operated and funded on a sector basis. In Asia (including Malaysia), discrete sectoral responsibilities and jealousies over power sharing between different ministries can be especially acute. Hall 2000 (cited in Cochrane, 2007, p. 297) noted that throughout Asia, “appropriate and effective institutional arrangements for managing the relationship between tourism and the environment are lacking”. This indicates that the cross-sectoral approach of SLA could struggle within this context.

Different models of tourism prevail in different countries, and tend to reflect local values and local institutions. If tourism is to support conservation and livelihoods, efforts to manage it must be made through frameworks which are firmly contextualised within the social and political environment where it takes place (Cochrane, 2007). The social and political environment of Sukau is one where projects tend to be ‘owned’ by a particular governmental department or NGO. It is likely that corruption is accepted, and traditional structures such as hierarchy and respect for authority are strong. For these reasons it was decided that SLA was not a suitable approach for this study.

2.8 Local participation

A participatory approach influences positive social changes and attitudes towards tourism and conservation. It is proposed by a number of authors that tourism can contribute to reducing poverty and minimising the local negative impacts when priority is given to local

communities' necessities, enhancing poverty reduction and creating appropriate strategies according to the context and local constraints while maintaining environmental conservation (Mendoza, 2006; Nowaczek et al., 2007; Scheyvens, 2007a).

To achieve and enhance a strong connection between the local communities and the biodiversity conservation goals, it is considered essential to involve local people in the planning and management processes and increase local participation through the whole process (Brandon & Wells, 1992; Mendoza, 2006). The critical factor concerning active participation in tourism is community control. It is very important that communities feel empowered prior to engaging in tourism initiatives. This should mean that communities have the power to decide whether or not tourism is an appropriate development avenue for them to pursue and in what form it should be pursued (Scheyvens, 2002).

An example of tourism activities taking place in natural environments with no community involvement is Serengeti National Park in Tanzania. The local communities in the Park's vicinity have few work opportunities and sources of income. No participatory approaches were undertaken to involve the local communities in the Park, and legal access to natural resources is restricted. Legal hunting is accessible outside the National Park, however the limited areas cannot supply the high levels of local demand (Kaltenborn, Nyahongo, & Tingstad, 2005). This lack of community involvement and restricted legal access to the natural resources lead to illegal poaching within the Park in response to food shortages and the lack of other alternatives to fight against poverty. This is a classic example of a project which is unsuccessful in meeting conservation and development goals because it failed to combine the context with local needs (Kaltenborn et al., 2005).

However achieving active participation in rural areas in developing countries is not a simple process. Nowaczek (2007) and Scheyvens (2007b) both note that communities are complex entities with various factions, and it can therefore be difficult to implement effective community development in practice.

A number of constraints to the active participation of communities in tourism ventures were identified by Koch 1997 (cited in Scheyvens, 2002):

1. Communities often lack proprietorship over land and natural resources, thus participation in tourism is limited to co-option in ventures controlled by outsiders.

2. Appropriate skills, knowledge and resources for developing tourism ventures are often lacking at the community level.
3. Poor communities find it difficult to accumulate or attract the capital necessary to develop tourism facilities or attractions.
4. Communities are typically heterogeneous, comprising a range of different interest groups which may come into competition regarding the development of a potentially lucrative tourism venture.

Communities may also be heterogeneous in terms of financial status. It is possible that a community contains groups such as 'the rich', 'the relatively poor', and 'the poorest'. Often 'the rich' or 'the relatively poor' may prevent 'the poorest' from entering the decision-making arena. This ensures that decisions are made which allow 'the rich' to accrue the majority of benefits. In doing so, participative and consultative approaches may in fact constitute little more than fostering consent among members of the community who already support growth of the tourism industry (Schilcher, 2007, p. 170).

As previously mentioned, protected areas are often in economically marginal areas, and the local population tend to have low education levels and weak representation within local governance (Cochrane, 2007). Involvement in tourism can also be restricted by a lack of capital resources. Lack of social resources is also a significant barrier to engagement in tourism – the locals may only take advantage of opportunities which coincide with pre-existing skills or facilities.

Ashley and Roe 1998 (cited in Scheyvens, 2002) have identified that major limitations for local communities in engaging with the tourism sector are the unequal distribution of benefits, and the fact that control often remains with outsiders. Efforts by communities to enhance their own well-being through tourism ventures will rarely be successful without coordinated efforts involving other stakeholders (Scheyvens, 2002). It is often necessary for governments to intervene to provide appropriate legislation and support in the way of information and training (Scheyvens, 2007a).

One of the objectives of this research will be to determine the extent to which local participation in tourism is currently limited, wide spread, or facilitated in Sukau.

2.9 Critiques of tourism for achieving conservation and development goals

The relationships between conservation, development, and tourism have been discussed. Still there are a number of criticisms of the use of tourism for achieving conservation and/or development goals. For example, the push for poorer regions and countries to develop tourism is thought by some critics to be part of a process of selling out ‘third world’ resources and raw materials in the form of natural environments to external interests represented by tour operators (Schellhorn, 2007). Furthermore, developing countries offer cheap labour: “to some extent tourism always feeds off the poverty of host regions” (Pluss and Backes 2002 cited in Scheyvens, 2007a, p. 238).

There are also doubts about the extent of the potential for the local community to become involved and benefit through tourism. The community’s involved often lack education and the wide range of business and marketing skills which are required to manage day-to-day operations (Scheyvens, 2002). They may also lack the networks and contacts to mainstream tourism enterprises (Scheyvens, 2007a). A number of authors (Campbell 1999, Gartner 1996, Tosun 2000 cited in Nyaupane, Morais, & Dowler, 2005) are doubtful that the community will have the investment capital, know-how or infrastructure necessary to take initiatives in developing tourism. Nyaupane et al. (2005) also mention that the community may have cultural restraints which limit their involvement in the planning and management of tourism. In societies with heavily centralised political structures, members of the host community may feel that it is the government’s duty to plan economic development opportunities for their region and that it would not be appropriate for them to take initiatives. On top of this, tourism (other than pilgrimages) may be a concept difficult to grasp by people living in isolated rural communities (Kang 1999, Timothy 1999 cited in Nyaupane et al., 2005). There is also an underlying assumption that once engaged in the operation, potential streams of revenue will stop locals from depleting natural resources (refer Figure 1). However in practice, locals often retreat to secondary positions in the tourism industry, and hence the incentives to protect the environment may be reduced (Nowaczek et al., 2007).

Often it is assumed that communities are homogenous entities with shared interests, when in reality most communities are made up of distinct interest groups. Often communities are split into various factions based on a complex interplay of class, gender and ethnic factors, and certain families or individuals are likely to lay claim to privileges because of their

apparent status. Not all stakeholders that are involved in tourism projects have equal access to economic and political resources. The group that has more power will generally impose their interests in the planning process (Nowaczek et al., 2007). Elites often co-opt and come to dominate community-based development efforts and monopolise the benefits of tourism (Mowforth and Munt 2003 cited in Scheyvens, 2007a). Weaver and Elliot (1996 cited in Schellhorn, 2007) note that the development of tourism often advantages those who are able to take up new opportunities because they have the economic power to do so, while the poorest have very little or no benefit at all.

Some critics claim that ecotourism can generally only achieve the economic conservation incentive for which it is promoted through large visitor numbers and the associated income from entrance fees. Prevailing institutional arrangements usually prescribe that the income from fees is remitted to national or regional treasuries (Cochrane, 2007), while the large visitor numbers can have a multitude of effects on the local community and surrounding environment. For example, Belsky (1999) concludes that ecotourism incomes were too sporadic, insufficient and unevenly distributed to significantly improve village livelihoods or change any conservation behaviour within a community-based rural ecotourism project in Belize over a six-year period. Also, in a 1997 study of Taman Negara National Park (one of Malaysia's most important tourism destinations), GTZ (a German development agency) found that 90 per cent of the revenues are not retained in the park region. At the same time, rising living costs and environmental harm related to tourism represent negative factors for the local population. Writing also in an Asian context, Cochrane (2007) notes that tourism revenues are rarely channelled back into conservation. Alternative, small-scale and community-based forms of tourism development do not generally earn a lot of revenue in the short term. In addition to this, stable tourism incomes are unlikely as tourism is dependent upon many factors which are beyond the community's control, and tourist flows may vary at any stage (Schellhorn, 2007).

Yet with careful planning and in-depth understanding of the community, it is still believed that there is potential for tourism to promote equitable, sustainable development for people in developing countries (Butcher, 2007; Scheyvens, 2007a).

2.10 Summary

It is evident that tourism, conservation, and development are inter-related. The UNEP views tourism as a strategic conservation instrument and the Sabah Tourism Master Plan mention that there is potential for the income generated by tourism development in Sukau to help justify conservation. Governments of developing countries such as Malaysia, support tourism as a development tool because it provides employment, improves balance of payments, boosts foreign exchange earnings and is assumed to support regional development. Consequently, tourism projects which address both development and conservation issues have become common-place in developing countries.

Yet in order to address whether tourism is an effective alternative for the locals of Sukau, it is essential to understand the complexities of the study area. Hence this chapter is followed by a literature review of Sukau's unique biophysical, social, and economic environment.

3 Sukau study area

An understanding of the study area is important for investigating the relationship between conservation, livelihood development, and tourism in a specific location. Hence, the purpose of this chapter is to review literature on the biophysical, social, and economic environments of the village of Sukau. The first section outlines the geographical, social and economic context of the state of Sabah. This is followed by sections which summarise the site features, people, and natural environment of the Kinabatangan District. This includes discussions on livelihood options in Sukau village, and the study area's unique biodiversity. The current threats to, and protection status of, the study area are also presented. Following a review of land ownership and the history of land use, the current forms of land use in the study area are outlined. This includes palm oil developments, forest reserves, the SAFODA rattan plantation, Gomantong caves, and the Kinabatangan Wildlife Sanctuary. The chapter is concluded with sections which discuss tourism development in Malaysia, Sabah, the Lower Kinabatangan, and Sukau.

3.1 Sabah

Located on the island of Borneo (Latitude 5° 25' 0 N), the Malaysian state of Sabah directly borders Sarawak (Malaysia) and Kalimantan (Indonesia), while the independent nation of Brunei is also a geographically close neighbour to the south-west (Figure 3). Borneo is separated from Peninsula Malaysia by the South China Sea.

Figure removed for copyright compliance

Figure 3. Map of Borneo (Source: www.news.mongabay.com).

Sabah (Figure 4) is one of thirteen states in Malaysia, and is the second largest after Sarawak. It consists of five administrative divisions which are then further divided into a total of 24 districts². Sabah has a total land area of 76,115 square kilometres. The population estimate in 2000 was 2,449,389 with a population density of 32.2 per square kilometre. In 2007, the estimated population of Sabah was 3,400,000 (Wikipedia, 2007). This high population growth rate is largely attributed to a huge influx of immigrants. It is widely known that Sabah's locality and employment opportunities have attracted numerous immigrants to the State, many of whom are reputedly working illegally (Sabah Development Corridor, 2008a). The majority of these immigrants come from the Philippines, Indonesia, and East Timor. Non-Malaysian citizens now make up one-quarter of the total population (Sabah Development Corridor, 2008a).

Figure removed for copyright compliance

Figure 4. Map of Sabah (Source: www.sabah.edu.my).

3.1.1 Sabah's economy

Traditionally Sabah's economy was lumber dependent and based on the export of tropical timber. In fact, the export of timber from the forests of the Lower Kinabatangan region provided the Sabah government with much of its revenue during the period 1950 to around

² Sukau village is located in the Kinabatangan District which is within the Sandakan Division.

1975 (Payne, 1989). However with the increasing depletion of natural forests, it was later decided that agriculture deserved precedence over forestry. Rubber and cacao both became important export crops; yet these were quickly overtaken by oil palm plantations. In 2007 the total area under oil palm in Sabah was 12,782 square kilometres (Malaysian Palm Oil Board, 2008a), which equates to approximately 17 per cent of the total land area in Sabah. Tourism is currently the second largest contributor to the economy (Sabah Development Corridor, 2008b).

In 1970, at the peak of the timber industry, Sabah was one of the richest states in Malaysia. However, now despite its vast wealth of natural resources, Sabah is currently the poorest of Malaysia's states (Economic Planning Unit, 2006). Part of the problem is said to be the inequitable distribution of wealth between the State and the Federal government, as well as the previously mentioned large numbers of illegal immigrants. The state has the highest poverty level in the country, which at 16 per cent is more than three times the national average. Average incomes are now among the lowest in Malaysia, alongside a considerably higher cost of living than in West Malaysia. The Federal government identified this disparity in the Ninth Malaysia Plan 2006-2010 by allocating RM16.908³ billion for Sabah, the second highest state allocation after Sarawak. The funds are said to be used for the purpose of improving the state's rural areas, transportation and utilities infrastructures, and boosting the economy of Sabah. The government has placed its focus on three major areas of the economy which they believe have the potential to be Sabah's growth engine - agriculture, manufacturing and tourism (Sabah Development Corridor, 2008b).

3.2 Kinabatangan – site features

The Kinabatangan District has a total of 104 villages – 13 of which are in the floodplain. Of the eleven major settlements along the Kinabatangan River, four are currently involved in tourism ventures – Batu Putih⁴, Bilit, Sukau and Abai.

³ RM is the official abbreviation for 'Ringgit Malaysia' (otherwise known as the Malaysian Ringgit [MYR]) which is the currency of Malaysia. As of November 1st 2008, 1RM = 0.48NZD; 0.22EUR; 0.28USD.

⁴ Also often referred to as 'Batu Puteh'

3.2.1 Kinabatangan River

The Lower Kinabatangan is the largest alluvial floodplain in Malaysia. The upper catchments of the Kinabatangan River are the forested hills near Mt Trus Madi and the Maliau Basin in the centre of Sabah (refer Figure 4). Much of the lower half of the Kinabatangan meanders through a floodplain which is covered with water during rainy periods, and becomes even more water-logged at high tide (Payne, 1989). The river flows 560 kilometres eastwards towards the Sulu Sea, draining a total catchment area of 16,800 square kilometres (approximately one quarter of the land area of Sabah), with a mean annual rainfall of about 3,000 mm (Pang, 2003). It is one of Borneo's few navigable rivers, and is tidal up to Bukit Garam (Vaz, 1993) (Figure 5). Geomorphologically the Kinabatangan River is still active, which is evident by the large number of meanders and ox-bow lakes (Prudente & Balamurugan, 1999). The Kinabatangan River serves as an important transport route and the local people continue to rely on the river's fish and prawns as a livelihood source. Since 1991 the use of the Kinabatangan River has been diversified with an increased demand for wildlife viewing from its waters.

Figure removed for copyright compliance

Figure 5. Map showing the location of relevant villages along the Kinabatangan River (Source: (Yoshiba, 1964)

3.2.2 Menanggol Tributary

The Menanggol tributary can be reached by a five minute boat ride from Sukau and the nearby tourist lodges. It is a narrow river, however it is deep enough to allow small boats to travel up at least three kilometres (Vaz, 1993). The trees along the Menanggol are

slightly lower than those along the Kinabatangan which makes for excellent wildlife viewing (Photograph 1).



Photograph 1. Tourist boats on the Menanggol tributary

3.2.3 Climate

The equatorial climate of the region is generally wet and humid. Daily temperatures are consistently high and range from 23-32 degrees Celsius with virtually no seasonal variation (Vaz, 1993). These are ideal climatic conditions for oil palm. The rainy season lasts from October to May with the 'less rainy' season following. During the rainy season the Kinabatangan River becomes swollen and floods the surrounding areas. Large floods occurred in 1963, 1967, 1986, 1996 and 2000 and caused serious damage to property (Prudente & Balamurugan, 1999). While, the frequency of floods has not changed, there is evidence that a given amount of rain now causes more severe damage. For example, the flood in 2000 reached higher levels than that in 1996, although total rainfall was less (Pang, 2003). It is likely that land use changes are contributing to an increase in flooding, and consequently these floods are now affecting many of the oil palm plantations in the area. These issues will be further discussed later.

3.3 Kinabatangan - people

3.3.1 Employment

The population of the Kinabatangan district in 2000 was 96,986, with a working population of 44,402 persons. Of this, 39,445 were employed in agriculture, hunting and forestry (88.83 per cent of the total employed) (Institute for Development Studies (Sabah), 2008a). Unfortunately more recent official figures were not available at the time of writing. For those people located close to rivers, fishing is an important livelihood. However the majority of the population of the Kinabatangan district are inevitably employed within the palm oil industry.

3.3.2 Orang Sungai

The Orang Sungai (a broad Malay term that has been given to the people who settled along rivers) currently live in small settlements scattered along the Kinabatangan River (Azmi, 1996). Some are descended from the ‘true natives’ – the Dayaks of Borneo. However the present communities of the Lower Kinabatangan have been formed largely from past and present migrant settlers of diverse origins and ethnic groups such as the Suluk, Kagayan, Bugis and Chinese (Vaz, 1993). Many of these migrants were attracted to the region by work in timber camps or agricultural plantations in the early 1950s (Azmi, 1996). The Orang Sungai are identified as a specific group among the 66 ethnic communities of inland Sabah, and the majority are Muslim (Vaz, 1993). Historical records show that the population density in the Lower Kinabatangan has never been very high (Vaz, 1993), however numbers have been increasing in recent years with enhanced work opportunities.

3.3.3 Sukau

Kampung⁵ Sukau is located alongside the Kinabatangan River, 70 km upstream from the east coast city of Sandakan (Bagul, 2005) (refer Figure 5). For a long time the Kinabatangan River was the sole access way into the area, however now access to Sukau is also possible via a 42km road which is maintained by oil palm companies. This unsealed road joins the main road that runs between Kota Kinabatangan and Lahad Datu at the ‘Sukau Junction’. The total road distance between Sandakan and Sukau is 134 kilometres

⁵ Kampung means ‘village’ in Malay.

(Payne, 1989). This increased accessibility, as well as the village's proximity to the Menanggol tributary and the Gomantong caves, has led to Kampung Sukau evolving into the hub of tourism in the Kinabatangan (Bagul, 2005).

3.3.3.1 Livelihood options in Sukau

The lives of the Orang Sungai are focused around the river which provides a vital source of food, and a means of communication and transport. The local people have also long used the forests of the Kinabatangan as a source of building material, firewood, and medicine (Hutton, 2004). The Orang Sungai have traditionally engaged in subsistence activities, cultivating small amounts of rice, vegetables and semi-wild fruit trees. Most of their animal protein is obtained from fresh water prawns and fish from the rivers and lakes (Vaz, 1993).

The locals of Sukau still tend to live an economically precarious existence. Four factors are important here. First, the extended family system permits one person with income at any particular time to support many other relatives, in the expectation that s/he will be supported by others in the future. Second, the fact that a family will own and/or legally occupy several pieces of land means that accommodation and water are free, that some food can be produced, and that people can move and be based temporarily wherever job opportunities become available. Third, people take on short-term jobs whenever the opportunity is presented or when necessity dictates. The range of such jobs is wide, but all are temporary. Fourth, many families have at least one member who receives a regular salary from government, in one capacity or another (Payne, 1989). Many families are also supported by government subsidies, such as housing subsidies, agriculture subsidies, and flood relief aid. They also depend on subsistence activities by gathering wild plants to eat as vegetables, and many families plant a small orchard near their home, selling any surplus fruit at the weekly market. Wild foods are supplemented with edible young leaves from tapioca, papaya, sweet potato and other crops planted in their gardens (Hutton, 2004).

However within a largely global transition from subsistence to monetary economies, the locals of Sukau are increasingly seeking alternative activities to earn cash incomes. These include subsidized cash crops, contract work on oil palm plantations, clearing forests and building village infrastructure, and running small-scale shops and transport services (Vaz,

1993). Now that Sukau is promoted as a tourism destination, opportunities have arisen for locals to gain employment within the tourism sector. The extent of tourism as a livelihood option for the locals of Sukau will be debated in this thesis. Fishing is an important village activity for food and a source of cash income (Azmi, 1996). While potentially the greatest threat to conservation efforts in the area is the conversion of rainforest on private land into smallholder palm oil plantations, locals can also gain ‘wind-fall’ profits⁶ from natural resources and leasing or sale of land (e.g. to tourist operators, for rights to timber on alienated land, or to oil palm estates) (Azmi, 1996). Perhaps due to the above reasons, the majority of the villagers lead a relaxed lifestyle, and merely tend to work on demand.

3.4 Kinabatangan – natural environment

3.4.1 Biodiversity of the area

Since the 1980s, scientific research has consistently produced evidence of the vital importance of the Lower Kinabatangan in wildlife conservation (Hutton, 2004). An estimated 50 mammal species and approximately 200 bird species have been recorded in the area (Hutton, 2004). Freshwater fish biodiversity is high with more than 100 species, and so is fish productivity (Prudente & Balamurugan, 1999). However this is being threatened by the decreasing environmental quality of the area. The Lower Kinabatangan is one of only two places in the world (the other being the Danum Valley in the southeast of Sabah) where it is possible to see ten species of primates (Hutton, 2004) – four of these species being endemic to Borneo. These include Borneo’s unique proboscis monkey, and the largest concentration of orang-utans in the world. It is also the site of the only current research on orang-utans in the wild (Pang, 2003). The forests are an important home and migration route for the Bornean pygmy elephant – a distinct sub-species of the Asian elephant, which is now confined to Sabah’s east coast (Hutton, 2004). Eight of Malaysia’s threatened bird species are found in the area, including Storm’s stork, the Oriental Darter, and a number of hornbill species.

Although the biodiversity within any one specific habitat type alone is not considered to be highly significant by Borneo rainforest standards, the variety of habitat types (which

⁶ ‘Wind-fall’ profits could be defined as unusually large, short-term profits obtained by unsustainable exploitation of natural resources (usually timber) and edible birds nest collection.

include limestone caves, dry land dipterocarp forests, riverine forest, freshwater swamp forest, oxbow lakes, and salty mangrove swamps near the coast), and the variation within those habitats, results in a collectively significant high level of biological diversity (Prudente & Balamurugan, 1999). It has been predicted that the total number of flowering wild plant species in the region is approximately 2,500. However it is speculated that numbers may be declining given the clearing of the species-rich forests for oil palm plantations (Prudente & Balamurugan, 1999). The Gomantong caves provide habitat for numerous endemic plants and animals (Pang, 2003). Whilst freshwater swamp forest is the natural vegetation of most waterlogged and seasonally flooded land in the area (Prudente & Balamurugan, 1999), dipterocarp forest (a type of dryland forest where the diversity of plant and animal life is most intense) once covered most of Borneo, including the Lower Kinabatangan. This is the forest that was most sought after for logging. Although most of this forest has been removed from the Kinabatangan, patches do still remain, namely in the Wildlife Sanctuary and the Forest Reserves. Hence scientists prize the Lower Kinabatangan as a natural heritage site of international importance (Prudente & Balamurugan, 1999).

3.4.2 Threats

Although commercial logging operations have ceased in the area, the forests of the Lower Kinabatangan are not free from disturbance. As sawmills are facing timber shortages, the temptation to remove timber illegally is strong (Pang, 2003). Also, if the lowland alluvial swamps are drained, they are ideal for cultivation of oil palm (Azmi, 1996). Therefore companies are still applying for forested land for conversion (Pang, 2003; White, 2008). The financial incentives are high for locals to convert their private land from forest into agriculture. One option is to sell or lease their land to palm oil companies seeking to expand their plantations. Yet the local villagers tend to view smallholder palm oil farms as the more lucrative option. The implications of potential land use modifications on private land for the wildlife and biodiversity of the area is severe as it will further fragment the forested area. As previously mentioned, the flagship species of the KWS include the orang-utan, Bornean pygmy elephants, proboscis monkeys and hornbills. These species require a large forested area. Thus, further fragmentation of the forested areas would consequently put the future of these species in jeopardy. The opportunity to view these species in the

wild is the purpose for which the majority of tourists come to Sukau. Hence it is essential for the tourism industry in Sukau that populations of these species are maintained.

Declines in wildlife numbers have occurred. Although the main cause of this is the loss of forest habitat and increased fragmentation of remnant forests, pressure from hunting has also contributed. All hunting within the Wildlife Sanctuary is prohibited, while the hunting and/or capture of fauna on the protected list is prohibited everywhere in Sabah. Yet illegal hunting does occur in the KWS. Hunting by local residents is largely restricted to Sambar deer (*Cervus unicolor*) and mouse deer (*Tragulus* spp.) for consumption, while other animals hunted include wild cattle, water hens, pigeons, and egrets. The Orang Sungai currently do not hold any form of indigenous rights in the sanctuary. While hunting by locals tends to occur on a small-scale, sport hunting and commercial hunting are common among outsiders and plantation workers. Those animals trapped or hunted for sale include estuarine crocodile, hill myna, hanging parrot, white rumped shama, and pig tail and long tail macaques (Prudente & Balamurugan, 1999). The Wildlife Department recently confiscated squirrels and a number of monkey species (including proboscis monkeys) from non-locals travelling by car out of the District (M. Donysius, personal communication, August 2007). Wild animals are also caught (by outsiders) for sale as pets (Azmi, 1996).

The establishment of oil palm plantations has also posed a threat to the wildlife (Hutton, 2004). This will be further discussed later.

3.4.3 Protection status

Land Capability Classification categories and maps guide the allocation of land use in Sabah (McMorrow & Talip, 2001). The priority of land use allocation has historically been mining, agriculture, forestry and recreation/wildlife, in accordance with the perceived order of highest monetary return. The aim was solely to maximise probable economic gain from the land resource given moderate levels of management. Factors such as biodiversity, accessibility, social benefit, land ownership and the (then) current land use did not influence the grading (McMorrow & Talip, 2001). Therefore while other species-rich sites in Sabah (with lower potential for mining, agriculture or forestry) were declared as priority areas for protection in the 1980s, the lowland forest in the Lower Kinabatangan was converted to agriculture. Large sections of forest were continually cleared while scientific

research continued to produce convincing evidence of this area's importance for species conservation.

Although WWF suggested to the government that 56,000 hectares should be set-aside for protection, large sections of the Kinabatangan floodplain had already been designated for logging and agricultural conversion. Therefore retaining more forests for wildlife protection was complicated, and policy on land development had to be modified (Vaz, 1993). Still, in 1989 Sabah's Ministry of Tourism and Environmental Development (MTED)⁷ outlined a proposal to establish the Kinabatangan Wildlife Sanctuary (KWS). A study of the tourism potential of the area revealed exceptional potential and endorsed the concept of a wildlife sanctuary (Payne, 1989; Vaz, 1993).

In 2005, the Sabah State Government established the 26,000 hectare Kinabatangan Wildlife Sanctuary under the Wildlife Conservation Enactment. Although this is well short of the WWF proposal of 56,000 hectares, this protection status has provided a degree of security for ecotourism operators in the Lower Kinabatangan. The sanctuary consists of blocks of land which link the remaining pockets of forest reserves with the mangrove forests near the coast to provide a (currently fragmented) forested corridor along the lower portion of the river (Hutton, 2004). In doing so, it was expected to offer a basis for the protection of the swamp forest habitats, the freshwater ecosystem and the welfare of the local community, in particular socio-economic development and environmental protection (Azmi, 1996) (However the extent of these benefits for the local community will be debated within this thesis). The KWS is managed by the Sabah Wildlife Department (SWD) which is administered by the Ministry for Tourism Development, Environment, Science and Technology.

The rainforests of the Lower Kinabatangan are under threat for reasons of financial gain. It is thought that if people are given the opportunity to make the same amount of money (or more) by retaining the rainforests then this threat will cease to exist (White, 2008). Unfortunately the Kyoto Protocol on reducing greenhouse gases to combat climate change made no provision to pay for the protection of existing forest. Yet revisions of the Kyoto pact were discussed at a multinational conference in Bali, Indonesia, in December 2007.

⁷ Which later became the Ministry for Tourism Development, Environment, Science and Technology.

The possibility for wealthy nations to offset their carbon emissions by paying for the preservation of significant tracts of tropical rainforest was highlighted. Even still, mature forests may not qualify as carbon sinks as only growing vegetation absorbs additional carbon dioxide. Hence only areas of secondary growth forest could be protected under this clause in the Kinabatangan.

3.4.4 Land ownership

Who owns the rights to land, to use the land, and exploit the resources on the land is very important in terms of nature conservation and tourism (Payne 1995 cited in Bagul, 2005). In traditional Bornean societies, forest and marine products were often regarded as common property resources to which there was open access. Customary rights of individual usage existed within a community's territory, but these were often flexible and subject to group control. However all land matters in Sabah are now controlled by the state government, and claims to ownership have to be approved and registered by the state (Toh & Grace, n.d.). The Land Ordinance was established in 1930 to "regulate the alienation and occupation of State lands" (Land Ordinance Sabah Cap 68 1930, p. 8). Native land rights are addressed in Part IV of the Land Ordinance.

Under the Land Ordinance, property rights in Sabah currently fall into three categories: state property rights; private property rights; and communal property rights. Land in the Lower Kinabatangan is currently classified as 'state property' and 'private property'.

State property rights

Land under this category is known as State Land, and includes all forest reserves (Toh & Grace, n.d.). Applications for indigenous title can not be made on titled State Land. In the Lower Kinabatangan this includes the KWS, forest reserves, and SAFODA land.

Private property rights

These apply where land has been alienated for development - usually oil palm or other tree plantations owned by private sector companies or individuals. However the Land Ordinance, Part IV also provides for private ownership rights for individuals (indigenous title) (Toh & Grace, n.d.).

Applications for an indigenous title can only be made to untitled State Land, and can only be issued to land that is in active use. Claims are made at the district land office, and if granted, the native title is issued in perpetuity (Thien, 2005). Each family is allowed to register no more than 15 acres (six hectares) as indigenous land (Payne, 1989; Toh & Grace, n.d.). People in the Lower Kinabatangan region have taken advantage of this privilege and most families own or have applied for indigenous title to land. These smallholdings are able to provide families with food and income supplements (Payne, 1989).

The Land Ordinance forbids native landowners to ‘misuse’ their land rights by selling their land for short term profits to non-natives. However this practice is still prevalent despite being illegal (Seng, 2007). Yet the Land Ordinance does allow for native land owners to grant a sub-lease of the land to a non-native for a term not exceeding 99 years (Land Ordinance Sabah Cap 68 1930). This is a direct threat to the still-forested land under native title in the Lower Kinabatangan as oil palm companies are looking to further expand their plantations (J. Majail, personal communication, July 31, 2007). The lease or ‘sale’ of these forested lands would further fragment the protected areas under the KWS.

3.4.5 History of land use

Land ownership directly influences land use. For centuries, the forests of the Lower Kinabatangan attracted traders who travelled up the Kinabatangan River in search of merchandise including edible birds’ nests, rhinoceros horn, elephant ivory and hornbill casques for the Emperor and the wealthy mandarins of China. They also found an abundant source of forest products. However harvesting occurred on a relatively small scale, hence the Lower Kinabatangan forests remained largely untouched until recent decades (Prudente & Balamurugan, 1999).

The Kinabatangan was one of the first places in Sabah to be opened for commercial logging. After World War Two, Britain needed money and resources to rebuild themselves, and they used the resources in their colonies to help with this (R. Chong, personal communication, July 2007). Intensive logging in the Kinabatangan began when the logging monopoly held by the British North Borneo Timber Company was lifted in 1952, and reached its peak in the 1970s and 1980s (Hutton, 2004). During this time, policy

decisions on land use resulted in large areas of the Lower Kinabatangan being used for timber harvesting, and other areas which had not been issued with titles or long-term leases for agriculture were set aside as forest reserves⁸. Locals were employed as loggers and were paid comparatively good money compared with their previous livelihoods (R. Chong, personal communication, July 2007). With the disappearance of the valuable hardwood trees, it was later decided that agriculture deserved precedence over forestry, and most of these forest reserves were then made available to investors in agriculture projects (Fletcher, 1997; Payne, 1989). For communities along the Lower Kinabatangan, windfall profits were made from selling rights to timber on unclaimed land, and later that land was sold for agricultural development. Since then a relatively small number of companies have acquired most of the land in the Lower Kinabatangan for expansion of oil palm estates (Fletcher, 1997). There are no more forest reserves designated for timber production, and the size, abundance and quality of the trees in other forested areas generally make it unsuitable for commercial exploitation (Payne, 1989). Yet, illegal logging (Hoong, 2005) and conversion of private land from forest to agriculture continues to deplete the forest cover of the Lower Kinabatangan.

3.4.6 Current land use

3.4.6.1 Oil Palm

Oil Palm (*Elaeis guineensis*) is indigenous to West Africa. It grows primarily in damp alluvial soils, especially along river banks, yet it can be grown in less favourable soils when the climate is good (Dahlen, 1995). The ideal climatic conditions for oil palm closely parallel the pattern found in Malaysia – plenty of sunshine and rain. Equally important are Malaysia's temperatures which rarely exceed 35 degrees Celsius or fall below 22 degrees Celsius (Dahlen, 1995).

The British first introduced the oil palm to Malaya⁹ in 1875, and in 1917 the first commercial plantings of the trees took place on Peninsula Malaysia. Later with land constraints and an increase in land prices in Peninsula Malaysia, oil palm plantations looked to expand their operations into Sabah (Pang, 2003). Sabah's declining timber

⁸ The major objective of forest reserves was to protect potentially valuable forest against uncontrolled logging and shifting cultivation. Logging was permitted, however licences and permits were required.

⁹ 'Malaya' refers to the states on the Malay Peninsula that were colonised by the British from the 18th until the 20th Century.

resources in combination with the decline of international prices for traditional cash crops such as cocoa and rubber encouraged the State and the agricultural sector to explore the option of oil palm to generate economic revenue (Pang, 2003).

Commercially, oil palms are grown for their clusters of fruit, or 'Fresh Fruit Bunches' (FFB). Each fruit contains a seed (the palm kernel) surrounded by soft oily pulp. Oil is extracted from both the pulp of the fruit and the kernel. Sabah's palm oil plantations are now the most productive in Malaysia (Malaysian Palm Oil Board, 2008b). An average palm oil estate is around 2,000 hectares and employs roughly 200 workers. Normally an estate is productive for about 25 years, with peak production between 7-14 years (Bann, 1996).

Eighty-five per cent of the Kinabatangan floodplain has been converted from forest to agriculture (Pang, 2003). In 1995, 190,625 hectares were planted in palm oil in the Kinabatangan district, and this area had increased to 303,941 hectares in 2005 (Institute for Development Studies (Sabah), 2008b). Oil palm estates are currently the predominant land use within the Kinabatangan district (refer Figure 6)¹⁰. The Kinabatangan now has the most hectares planted in palm oil out of all other districts in Sabah (Institute for Development Studies (Sabah), 2008b).

Palm oil has the highest yield per hectare than any oil or oilseed crop (Roundtable on Sustainable Palm Oil, 2008). Yet the huge demand for the oil makes it very difficult to curb the spread of plantations. There is an increasing demand for palm oil from Western food manufacturers (Smith, 2007). Palm oil is also considered to be the most productive source of bio diesel fuel (Smith, 2007). This indicates that the worldwide demand for palm oil is set to increase alongside the rising demand for 'bio fuels'.

The UN has reported that the expansion of oil palm plantations is now the primary cause of deforestation worldwide (Smith, 2007). Therefore oil palm development clearly poses large scale and direct threats to natural ecosystems (Azmi, 1996). Further fragmentation of the forest in the Kinabatangan due to new palm oil plantations is an increasing threat to the

¹⁰ Unfortunately a detailed map of the current land use of the privately owned land is not available. Yet Ancrenaz, Calaque, and Lackman-Ancrenaz (2004) state that most of the privately owned land surrounding the KWS is planted in oil palm.

rich biodiversity and high conservation value of the area (Prudente & Balamurugan, 1999). The largest concentration of completely wild orang-utans can be found in the KWS (Pfeiffer, 2007). Increasingly being displaced from their rainforest habitat, the orang-utans (and other wildlife) search for food in the oil palm plantations and are regarded as an agricultural pest (Smith, 2007). The large oil palm companies are able to protect their plantations from wildlife with electric fences and other preventative measures. It is the local's, who can't afford such measures to protect their crops, who bear the consequences (Photograph 2).

Although the majority of oil palm plantations in the Kinabatangan District are on gentle sloping terrain, some are located within swampy and flood-prone areas. Currently, 75 square kilometres of flood-prone land along the banks of the Kinabatangan River are used for oil palm (Pang, 2003). This is considered by many as being unsuitable oil palm land as areas get flooded every year. The responses of the land owners to this issue vary. For example one owner has set aside this area of land for reforestation, while other land owners battle to control the floods every year instead (WWF officer, personal communication, August 2, 2007).



Photograph 2. Lala and the Head of Sukau village contemplate the damage by elephants to a locally owned coconut plantation.

It is clearly stated in Clause 40 of the Sabah Water Resources Enactment 1998 that land owners must establish a riparian reserve “within 20 metres of the top of the bank of every river, including its estuary, where the river channel is not less than three metres in width” (Department of Irrigation and Drainage Sabah Malaysia, 1998, p. 171). Although the

Lower Kinabatangan River exceeds three metres in width, it seems that most of the plantation companies in the Kinabatangan have ignored this regulation. Some have cleared the riparian reserve so that they can utilise this land for agriculture, while others believe that clearing the riparian reserve will help to prevent pests (J. Majail, personal communication, July 31, 2007). However this reserve regulation remains to be a legal requirement and therefore it can be legally enforced. These riparian reserves, if enforced, would assist the creation of corridors which link the forested areas, and aid the migration of fauna.

Poor land management of oil palm plantations also affects the water quality of the river system and its ecosystem. Water quality has been declining in the Kinabatangan and its tributaries since the 1960s with commercial logging, and worsened in the 1980s when the oil palm plantations and mills started operations (Prudente & Balamurugan, 1999). Soil compaction from oil palm development reduces the infiltration capabilities of the soil. Hence the base flow of the river is reduced which reduces the pollution dilution capacity of the river. The failure to maintain riparian reserves along the Kinabatangan has led to easy delivery of the sediment to the river as well as causing bank collapse. The Kinabatangan River transports approximately six million tonnes of sediment per year (Prudente & Balamurugan, 1999, p. 48). Light penetration is reduced which affects fish and prawn feeding and migration. Suspended sediments and increased nutrients due to increased surface erosion and fertiliser run-off can affect fish respiration and cause fish deaths (Azmi, 1996). This is especially evident in the tributaries and oxbow lakes.

The population of the Kinabatangan district has risen dramatically over recent years. This is probably due to increased work opportunities in the oil palm industry. However most of the jobs are taken by foreign immigrants (Payne, 1989). Almost all of the plantation labour force has been drawn from foreign workers (Indonesian and Filipino) – many of them illegal (Kow 1992 cited in Brookfield, Potter, & Byron, 1995, p. 61). Pay is poor, labour is hard and it appears that “...only people without the privilege of citizenship are willing to endure the tough work of plantation labour for money which is sufficient only for survival near (Sabah) poverty level” (Payne, 1989, p. 12). This influx of migrants into the region has created a number of problems for the conservation of natural resources and increases the pressure on natural, infrastructural and social resources (Azmi, 1996).

The Roundtable on Sustainable Palm Oil (RSPO) is “an association created by organisations carrying out their activities in and around the entire supply chain for palm oil to promote the growth and use of sustainable palm oil through co-operation within the supply chain and open dialogue with its stakeholders” (Roundtable on Sustainable Palm Oil, 2008). One of their aims is to make palm oil production more ‘environmentally friendly’. WWF endorse the RSPO, and a number of NGOs and oil palm companies in the Kinabatangan are currently members. Increasing public demand for more ‘sustainable’ products is putting mounting pressure on other companies to also become active in RSPO. It is hoped that this will ensure a more sustainable future for oil palm development and management in the Kinabatangan.

3.4.6.2 Forest Reserves

Forest reserves are divided into seven classes (Table 1), most of which are under the jurisdiction of the Sabah Forestry Department (SFD).

Table 1. Classification of forest reserves in Sabah (Source: Sabah Wildlife Department, 2004)

Class		Size (ha)	Per cent of total
I	Protection	342,216	9.5
II	Commercial	2,685,119	74.7
III	Domestic	7,350	0.2
IV	Amenity	20,767	0.6
V	Mangrove	316,024	8.8
VI	Virgin Jungle	90,386	2.5
VII	Wildlife Reserve	132,653	3.7

Currently there are a total of 3,594,515 hectares of forest reserves in Sabah, which accounts for 48.8 per cent of the total land area. Seventy-five per cent of this area is in Class II Commercial Forest for production purposes.

The forest reserves in the vicinity of the KWS serve a very important purpose as they (as well as the forested private tracts of land) provide an ecological corridor between the fragmented lots of the Wildlife Sanctuary. This unification is essential to the success of the KWS in terms of sustaining viable breeding populations of wildlife. There are six Class VI Virgin Jungle Reserves (VJR) which are significant for linking the protected areas under the Wildlife Sanctuary: Keruak Forest Reserve, Bod Tai Forest Reserve, Gomantong

Forest Reserve (which is also surrounded by Class I Protection Forest Reserve), Materis Forest Reserve, Pin Supu Forest Reserve, and Sg. Lokan Forest Reserve. These reserves are intended to provide undisturbed forest for research purposes and the preservation of gene pools. The Forest Enactment (1968) stipulates that none of the listed reserves can be de-reserved except when needed for a park or a game or bird sanctuary. Most activities on forest reserves are prohibited unless specifically authorised (Sabah Forestry Department, 2007a). Therefore the forest reserves in the area should be safe from being converted into agriculture.

Keruak Virgin Jungle Reserve (225 hectares)

This VJR is located adjacent to Sukau village (refer 1 on Figure 6). It is surrounded by oil palm plantations in the north and west; Kinabatangan River in the northeast; and Sukau and secondary forest in the south and southeast. Electric fences have been erected along the plantation-forest reserve boundaries to prevent elephants from encroaching into the oil palm plantations. There are a number of current uses of the forest reserve including the harvesting of edible birds nests. The local community have established tourist trails on a limestone outcrop in the south of the forest reserve for ecotourism purposes. However these trails are not currently used. The local villagers are known to collect timber (illegally) from the forest reserve for local use to build houses and boats. New tractor tracks and many spent bullet cartridges were observed by the SFD during a survey in 2001. This is evidence that the VJR is not safe from illegal logging, hunting and/or poaching even though it is located very close to the Sukau Forestry Office (Sabah Forestry Department, 2005a).

Bod Tai Virgin Jungle Reserve (1,816 hectares)

This VJR is situated near the villages of Sukau and Bilit on the left bank of the Menanggol River (refer 2 on Figure 6). All surrounding non-forested areas are planted with oil palm. As with the Keruak VJR, most of the forest reserve is frequently flooded and water-logged. The Bod Tai VJR and its surrounds (including Kampung Bilit) are traditionally used by migrating elephants. It has been identified that encroachment into the VJR by locals is very common (Sabah Forestry Department, 2005b).

Gomantong Virgin Jungle Reserve (1,816 hectares)

The Gomantong VJR is situated within the Gomantong Class I Protection Forest Reserve (refer 3 on Figure 6). The VJR contains the Gomantong Caves which are the largest producer's of edible birds' nests in Sabah. The Gomantong Class I Protection Forest Reserve surrounds the Gomantong VJR to safeguard the environmental quality of the wider habitat and feeding grounds for the swiftlets and bats which live in the caves (Hutton, 2004).

Materis Virgin Jungle Reserve (250 hectares)

The Materis VJR is located 1.2 km west of Gomantong VJR and is completely surrounded by oil palm plantations (refer 4 on Figure 6). Along its northern boundary, an area of about 200 metres wide (which is believed to be part of the VJR) was planted with oil palm trees. The SFD recommend that the forested Materis Hill in the north is also given protection status which will create a wildlife corridor from the Materis VJR to the Gomantong forest reserves and the KWS (Sabah Forestry Department, 2005c).

Pin-Supu Virgin Jungle Reserve (4,696 hectares)

The Pin-Supu VJR is made up of three blocks of land. Blocks A and B are situated east and west of the Sandakan-Lahad Datu main road near the Kinabatangan bridge. The town of Bukit Garam is situated approximately 10 km east of Block B. Block C is located north-west of the other two (refer 5 on Figure 6). Most of the land surrounding all three blocks of the VJR is owned or leased to large oil palm companies. Certain parts of the VJR (especially Block A) are visited by tourists who stay at Kampung Batu Putih, where there is a community-run ecotourism operation called MESCOT (Model Ecologically Sustainable Community Tourism). The community is also involved in planting indigenous trees for rehabilitation purposes (Sabah Forestry Department, 2005d).

Sg. Lokan Virgin Jungle Reserve (1,852 hectares)

The southern-most corner of this reserve is located 37 km from Bukit Garam (refer 6 on Figure 6). Oil palm estates border the reserve. Illegal encroachment is a threat to this reserve as there is a good road network through the oil palm plantations surrounding the reserve. This VJR links the Wildlife Sanctuary and a Commercial Forest Reserve.

The forest reserves mentioned above cover a total land area of 10,665 hectares, which help to connect the fragmented KWS. As previously mentioned, these forest reserves can only

be de-reserved when needed for a park or a game or bird sanctuary. Such a de-reservation has not yet occurred in the lower Kinabatangan.

3.4.6.3 SAFODA Rattan

The Sabah Forestry Development Authority (SAFODA) manages a rattan plantation which lies between the Lamog River and Batu Putih (refer Figure 6). It is the first large-scale venture in Malaysia which retains natural forest cover to support a commercial crop, and presents an alternative for the sustainable use of Sabah's forest resources (Vaz, 1993). Economic returns are obtained from the sale of rattan which is in demand by the international furniture industry. Several other benefits including helping to protect the water quality in the river, and providing habitat for wildlife are enjoyed by keeping the forest intact (Vaz, 1993). The SAFODA project provides income for local people, and as full-time, regular working hours are not necessary, the workers are also able to devote their time to other activities (Payne, 1989). Local villagers are officially denied access into the SAFODA land for harvesting plants and hunting of wildlife (Azmi, 1996).

3.4.6.4 Gomantong Caves

The Gomantong caves, located in the Gomantong VJR, have been harvested for their edible birds' nests for centuries. Two species of swiftlets which roost in the limestone caves of the Lower Kinabatangan region make nests which, when made into a soup, are regarded as a delicacy by the Chinese communities of Asia (Payne, 1989). About two million bats form spectacular flocks which spiral out of the caves every evening to spend the night feeding. As the bats leave the caves, predatory birds are seen snatching them (Payne, 1989). The floor of the cave is covered in guano and is home to a unique fauna including thousands of extremely large cockroaches (Borneo Tour Specialists, 2008). Collection of the edible nests using an array of bamboo and rattan ladders, ropes, poles and platforms, is a fascinating feature and occurs intermittently during the period about February-August (Payne, 1989). The management of nest collection is the responsibility of the Wildlife Department (Payne, 1989).

The most accessible cave (Simud Hitam) is open to visitors from 8am till 6pm daily, and the admission fee for an international adult is RM30 (Sabah Tourism Board, 2008a).

Simud Hitam is a ten minute walk through the rainforest along a well maintained boardwalk from the registration centre. The Gomantong VJR is not only an important protection zone for the swiftlets, but is also habitat to a wide-range of wildlife. Visitors often have the added bonus of up-close sightings of orang-utans while walking to the cave (Personal observation). In Payne's (1989, p. 28) tourism feasibility study, he recommends that "Gomantong should be the first focus for development of the Sanctuary because it is one of the most exciting features of the region".

3.4.6.5 Kinabatangan Wildlife Sanctuary

The 26,000 hectare Kinabatangan Wildlife Sanctuary (KWS) was declared Malaysia's first Gift to the Earth in 1999. This was upgraded to bird sanctuary status in 2002, and in 2005 the area was gazetted (amidst strong opposition from land developers and oil palm companies) as a full wildlife sanctuary. During the proposal stages of developing the KWS it was suggested that "the status of 'Park' (under the Parks Enactment, 1984) is not appropriate because traditional activities such as fishing and gathering of minor forest produce by local people are prohibited. There is no need to prohibit these activities and to do so would cause great resentment in the region" (Payne, 1989, p. 38). The sanctuary consists of eleven blocks of land which link the existing forest reserves and SAFODA rattan plantation with the mangrove forests near the coast to provide a (currently fragmented) forested corridor along the lower portion of the river (Hutton, 2004) (Refer Figure 6). The KWS is managed by the Sabah Wildlife Department (SWD). The SWD is also responsible for the implementation and administration of the Sabah Wildlife Conservation Enactment, 1997. Under 'Part Three Protected Areas – Wildlife Sanctuaries', the Enactment states that:

"No Wildlife Sanctuary shall be revoked, reduced in size or have its boundaries altered except by resolution of the Legislative Assembly",

And:

"From the date an area is declared a Wildlife Sanctuary under this section, no land may be alienated and no other grants may be made to any person in that Wildlife

sanctuary and no rights shall have effect therein except in accordance with this Enactment”.

This indicates that the current size of the Wildlife Sanctuary is relatively safe from being altered. However the problem of the discontinuous nature of the Sanctuary remains. The Management Plan for the KWS was due in 2008, three years after the area was declared a Wildlife Sanctuary (this is a requirement under the Wildlife Conservation Enactment 1997). It has yet to be released.

In summary, Figure 6 shows that the KWS is fragmented and surrounded by privately owned land. Most of this private land is planted in palm oil (Ancrenaz et al., 2004). The resulting landscape is that of islands of rainforest in amongst a sea of palm oil plantations (personal observation). Figure 6 also illustrates that Sukau in particular is surrounded by privately-owned land. As previously mentioned, a detailed land use map of this area is not available. Still through personal observations I can conclude that this privately-owned land is a combination of palm oil plantations, smallholder palm oil farms, and still-forested land that is under native title.

The fragmented landscape of the Lower Kinabatangan results in discontinuous ecosystems. As the majority of tourists come to the area for wildlife viewing, this affects the tourism product of Sukau village.

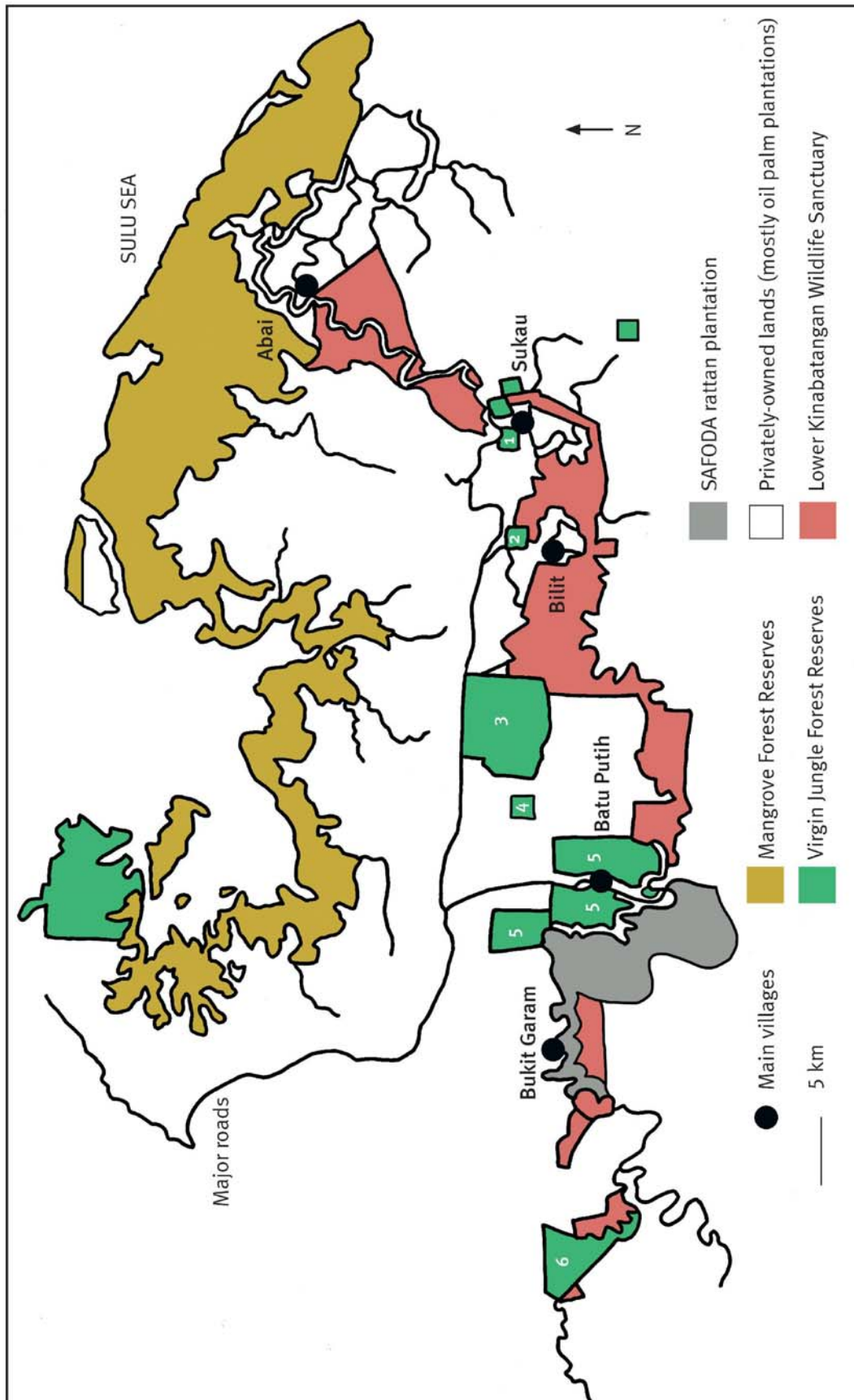


Figure 6. Current land use map of the Lower Kinabatangan (Adapted from Ancrenaz, Calaque, & Lackman-Ancrenaz, 2004).

3.5 Tourism in Malaysia

Tourism is currently the third biggest foreign exchange earner for Malaysia after natural gas and palm oil production (Hooker, 2003, p. 275). The industry is seen to be a tool for regional development (Corpuz, 2004), and a high fiscal commitment is contributed by the Ministry for further growth in tourism.

Malaysia joined The Association of Southeast Asian Nations (ASEAN) campaign during the early 1990s to boost the tourism industry in Southeast Asia (Hooker, 2003, p. 275). In 1990, 1994, and 2007 tourism was also enhanced by Visit Malaysia Year campaigns which helped to develop Malaysia's international profile.

The Ninth Malaysia Plan 2006-2010 allocates the national budget to all economic sectors in Malaysia for that period. In acknowledging that tourism activity generates high multiplier effects across many sectors,

“high priority will continue to be accorded to achieve more sustainable tourism development” (Economic Planning Unit, 2006, p. 199).

The Plan states that a more integrated approach to tourism planning and implementation will be undertaken to ensure sustainable development of the industry.

Ecotourism is currently the fastest growing form of tourism in Malaysia, averaging 35 per cent growth per year and contributing up to 10 per cent of the country's revenue (Vasanth 2005 cited in Kaur, 2006, p. 5; Pang, 2003, p. 67). Many government departments and tourist agencies have now adopted tourism as part of a management strategy to finance conservation (Corpuz, 2004; Kaur, 2006). The National Ecotourism Plan (NEP) was prepared by WWF-Malaysia and has been formally adopted by the Government of Malaysia to assist at Federal and State levels for the development of Malaysia's ecotourism potential. The Plan is intended to serve both as an appropriate instrument for Malaysia's overall sustainable development targets, as well as an effective tool for conservation of the natural and cultural heritage of the country (WWF Malaysia, 1995).

3.6 Tourism in Sabah

Borneo tops the world's ecotourism destination list, and it is estimated that demand is growing by approximately 20 per cent annually in the international market (World Tourism Organisation, 2001). Sabah welcomed 2,091,658 visitors' arrival in 2006 - a 14.4 per cent increase from 2005. This translated into tourism receipts of RM 2.875 billion for Sabah (Sabah Tourism Board, 2008b).

The Sabah Tourism Master Plan 1996 was endorsed and accepted by the Sabah State Government as the guiding document for the development of the Sabah tourism industry for the period 1995 - 2010. The Plan states that an important goal of tourism development is to maximise community participation and distribution of socio-economic benefits to the rural communities (Bagul, 2005). Ecotourism is now the main focus of the tourism industry in Sabah. The main attraction is stated to be the diverse wildlife of almost 200 species of mammals and over 500 species of birds (Sabah Tourism Board, 2007). The various ethnic groups (of which there are more than 30) provide tourists with an insight into a rich and diverse cultural heritage (Bagul, 2005). On top of this, the stable Federal and State governments provide an environment that is conducive for a successful tourism industry in Sabah (Bagul, 2005).

Although the development of the tourism industry in Sabah is mainly private-sector led, the Malaysian government is encouraging entrepreneurs, especially in the rural community, to set up small and medium scale tourism enterprises (Bagul, 2005).

3.7 Tourism in the Lower Kinabatangan

The Lower Kinabatangan is most likely one of the best wildlife viewing locations in Southeast Asia (Pang, 2003, p. 71). The wide range of animals and the relative ease of seeing them in their natural surroundings make the Lower Kinabatangan a highly attractive area for tourists (Bann, 1996).

Within the Sabah Tourism Master Plan 1996, the Sandakan/Kinabatangan region was identified for tourism development, and the Lower Kinabatangan is regarded as a 'hot-spot for ecotourism'. The Kinabatangan is described as

“top quality wildlife viewing under threat from surrounding development” (Sabah Tourism Master Plan 1996, p. 181).

The Sabah Tourism Master Plan includes a ‘Key area concept plan’ for the Sandakan/Kinabatangan Region. Within this there is a ‘tourism development concept plan’ which makes a number of recommendations for tourism in Sukau. Amongst these recommendations were for tourism not to be based on further lodge development, but rather “it should be spread out up and down the Kinabatangan using various styles of tourist boats, including house boats” (Sabah Tourism Master Plan 1996, p. 499). The Plan also recommends a ‘tourist boat train’ to mitigate the overcrowded situation on the Menanggol tributary.

The NEP states that the intention of tourism development in the area is to promote genuine local involvement in tourism at a pace suited to local conditions (WWF Malaysia, 1995, p. 199). In the Plan it is noted that “private sector investment is heavily concentrated at one site” (WWF Malaysia, 1995, p. 198). The authors also propose that tourism should be spread more widely and thinly along the Kinabatangan River.

Due to the drastic decline of the timber industry, it was obvious that changes in the local economy were needed (Vaz, 1993). Tourism was identified as a means whereby conservation could complement existing livelihoods for the local people (Pang, 2003). Prior to the establishment of the Wildlife Sanctuary, a tourism feasibility study for the Lower Kinabatangan was conducted by WWF Malaysia in 1989, and subsequently a management plan was developed for the proposed protected area. Among the recommendations was one for the active involvement of local communities in the management of the sanctuary, and tourism was highlighted as one of the ways to achieve this (Fletcher, 1997).

The first basic ‘eco’ jungle camp was established in 1989 downriver from Batu Putih (Uncle Tan’s Jungle Camp); while the first wildlife lodge was established in Sukau in 1991. Both of these developments occurred before the Kinabatangan Wildlife Sanctuary had been gazetted. Currently four out of the eleven villages along the Lower Kinabatangan River are involved in tourism: Batu Putih, Bilit, Sukau, and Abai. Within these four villages there are now a total of fourteen lodges as well as a home-stay programme in each.

Past research has indicated that tourism in the Lower Kinabatangan largely depends on private tour operators which have the necessary capital, expertise and man-power to set up and run tourism facilities (Pang, 2003). The involvement of local communities' has been minimal and economic leakage from the villages is high (although not from Sabah). Most staff come from urban centres, and food and other necessities are purchased from outside the villages (Fletcher, 1997). The locals have been slow to get involved, as unfortunately very few local people have much idea of what tourists expect and require, i.e. the quality of service required or the tight time budgets of tourists. The services of professional tour operators and tour guides have until now been essential for tourism development in the region (Payne, 1989).

3.8 Tourism in Sukau

Prior to 1991, when the first lodge was developed in Sukau, tourism in Sukau was limited to day-trips organised by external tour operators and entrepreneurs. These trips catered for the hard-core nature enthusiast market, and tourist numbers were low. Nonetheless, Sukau has evolved into the hub of tourism in the Lower Kinabatangan. The number of visitors to Sukau was approximately 13,000 in the year 2000 (Hutton, 2004). In 2001 the lodges received almost 18,000 tourists, of which more than 80 per cent were foreign (Yoneda 2003 cited in Rajaratnam, Pang, & Lackman-Ancrenaz, 2008). Unfortunately more recent visitor figures were not available at the time of writing.

Currently the majority of tourists arrive in Sukau by road from Sandakan. In doing so, they are exposed to hundreds of hectares of palm oil plantations before reaching the village (Corpuz, 2004) (Photograph 3). A lesser number of visitors arrive by boat from Sandakan.



Photograph 3. Oil palm - the predominant view from the main Sandakan-Sukau road.

3.9 Summary

Scientific research consistently produced evidence of the vital importance of the Lower Kinabatangan in wildlife conservation. The tourism potential of the area helped to justify the protection of wildlife by the establishment of the 26,000 hectare Kinabatangan Wildlife Sanctuary in 2005. Still the forests of the Lower Kinabatangan are not free from disturbance, and are under threat for reasons of financial gain. The Wildlife Sanctuary is already fragmented and surrounded by privately owned land. Most of this private land is planted in palm oil. Further fragmentation of forested areas due to new palm oil plantations is an increasing threat to the rich biodiversity and high conservation value of the area. It is thought that if people are given the opportunity to make the same amount of money (or more) by retaining the rainforests then this threat will cease to exist. There are now opportunities for locals to gain employment within the tourism sector. The flagship species, for which the majority of tourists come to Sukau to see, require a large forested area. Thus, further fragmentation of the forested areas would consequently put the future of these species in jeopardy. Hence it is essential for the tourism industry in Sukau that populations of these species are maintained.

This study will attempt to answer whether tourism is an effective alternative livelihood source for the locals of Sukau village in the Lower Kinabatangan, Sabah. Information was gathered during field research in Sukau village in July and August 2007. Apart from the structured questionnaires and interviews with the lodges, predominantly qualitative

research methods were used. This included semi-structured interviews with the local villagers of Sukau, and informal interviews with key informants in the area. The information gathered from these sources is further strengthened by my own personal and participatory observations while staying in the village for 28 nights and participating in village life.

4 Methodology

4.1 Introduction

The objective of this Chapter is to discuss the methods used in this research. The chapter is divided into four sections:

- Preliminary methodology.
- Field validation of methodology.
- Revised methodology.
- Methodological problems and constraints.

The first section (preliminary methodology) outlines the research methods which had been decided upon before beginning my field research. Approval for this research methodology was received from the Lincoln University Human Ethics Committee. Each of the techniques which I planned to use to gather information for my research is described in the future tense. Also mentioned are translator issues, the need for pre-testing the interview questions, and the requirements of gaining research approval from relevant Sabah authorities. The second section (field validation of methodology) explains why the proposed methodology had to be altered in a number of ways once I began my fieldwork due to the contextual realities of the study area and associated time constraints. The third section (revised methodology) outlines the research methods which resulted from the required changes to the initial proposed methodology. This is the methodology which was used during the field research to obtain information on conservation, livelihoods, and the role of tourism in Sukau. The fourth section (problems and constraints of the methodology) examines the limitations associated with the methodology, and the problems I encountered with doing field work in a foreign country and undertaking research as an obvious ‘outsider’.

4.2 Preliminary methodology

The aim of this study is to gain information on the impacts of tourism on the local communities in the Lower Kinabatangan River District. There are four villages along the Lower Kinabatangan River which are currently involved in tourism: Batu Putih, Bilit,

Sukau, and Abai. Research will take place in all four of these villages using the same research methods in each of the study sites. This will allow the data from each village to be analysed individually and compared, as well as pooled together as data for the Kinabatangan District. A combination of approaches will be pursued:

- Literature review and other secondary data collection.
- Survey of the tour operators.
- Survey of members of the local community.
- Personal observations.

For this study, both quantitative and qualitative data collection methods will be used.

The quantitative methods will include a questionnaire that will reach all current tour operators but the data will not be in-depth. Qualitative approaches with a smaller sample size will allow in-depth investigation about issues and will produce “descriptions of situation, events, people, interactions and observed behaviours, and direct quotations from people” (Casley & Kumar, 1988, p. 3).

4.2.1 Information sources

4.2.1.1 Literature review and other secondary data collection

The first step to data collection is reading and reviewing existing information sources before the commencement of field work. This will help to prepare me for my time in the field as some knowledge of the culture and history will be gained. It will also enable me to ask suitable questions. Secondary data will be collected via books, journal articles, internet searches, and newspapers.

4.2.1.2 Questionnaires

Quantitative data collection will involve a questionnaire survey of the owners of tourism lodges in the Lower Kinabatangan. I will visit each lodge along the Lower Kinabatangan during my stay and sit with the lodge owner/manager while the questionnaire is filled out. This will mean that I am able to answer any questions about the questionnaire which may arise. The results of the questionnaire are expected to provide a good overview of how the current lodges are operated. While the participants are completing the questionnaires they

will be asked if they are happy to expand on the information gathered by doing an informal interview.

4.2.1.3 Semi-structured interviews

Semi-structured interviewing is a reasonably quick method of gaining information from stakeholders on their views and experiences (Casley & Kumar, 1988). Key questions will be asked during the interviewing process, however new questions or lines of questioning are expected to arise during the interviews in response to the answers of the interviewees.

I will stay in each of the four identified tourism villages along the Lower Kinabatangan River for approximately one week. During this time, a number of semi-structured interviews will be undertaken with members of the community. By staying in each of the communities for a period of time while doing my research, I hope to become known, accepted and to create a good rapport between myself and many of the locals. I plan to approach and talk to people while walking through the village. This will be especially important for interviewing those that are not directly involved in tourism, and may assist in identifying family groups.

Group interviews will also be used. These are “... useful when it comes to investigating *what* participants think, but they excel at uncovering *why* participants think as they do” (Morgan 1988 p.25 cited in Tisen, 2004). Although group interviews do not provide the same depth of information as individual interviews, they have been found to be particularly helpful when seeking information about natural resources or community resources management (Sharpa 1996 cited in Casley & Kumar, 1988; Tisen, 2004). Gabriel (1991 cited in Tisen, 2004) suggests that information provided by the group may be more accurate than that gathered during individual interviews, because interviewees are open to correction by fellow participants. I have chosen to use a combination of group interviews and individual interviews. The group interviews will provide the opportunity to hear more people’s opinions and viewpoints within a shorter timeframe. However some interviews will be better done individually as some respondents may not feel comfortable with being interviewed in a group setting.

Eight interviews are planned for each village - five family group interviews plus three

individual interviews. This is a total of 20 family groups and 12 individuals interviewed over the four study sites. I believe that this number of interviews is achievable given my time constraints, and they should provide me with sufficient opportunities to receive adequate information from a variety of viewpoints. However these estimated numbers of interviews will depend on willingness to participate by the villagers, and whether or not sufficient information is received.

The interviews will be undertaken in a relatively informal manner and interviewees encouraged to put their ideas, thoughts and opinions across as much as possible. A list of questions from which to help prompt the interviewee will be prepared, however there will be scope for flexibility when dialogue allows. The interviews will be conducted with the help of a translator and recorded with a digital recorder. During the interviews, additional observations will be recorded on paper and later transferred to a computer. It is expected that each interview will take approximately one hour.

4.2.1.4 Observations

While in the villages there will be opportunity to informally discuss issues with people and obtain local knowledge on the area while also making my own observations.

4.2.1.5 PRA Techniques

Participatory Rural Appraisal (PRA) is described as a growing body of methods to enable local people to share, enhance, and analyse their knowledge of life and the conditions to plan, act, monitor and evaluate (Kumar, 2002, p. 31). PRA evolved from Rapid Rural Appraisal (RRA) in the late 1980s, and has continued to develop and gain popularity as an alternative to the failed 'top-down' approaches to development. The validity and reliability of information shared through PRA approaches is usually very high (Chambers, 1997), as the people being affected have the opportunity to share their expert local knowledge, views, and opinions. I plan to use PRA methods during my research. Yet I am aware that I may need to reassess the practicality of this once onsite.

4.2.2 Translator issues

It is expected that a translator will not be required during the interviews with the lodge owners/managers as they will be conducted in English. However all of the interviews with the local villagers will need to be conducted in Malay. My on-site advisor, Dr. Robert Ong from the Sabah Forestry Department, will help to arrange a suitable translator who is acceptable by the locals, and fluent in Malay and English. After arriving in Sabah I will spend two weeks in Sepilok before beginning my field research in the villages. During this time I will meet prospective translators to ensure that they are aware of good interviewing and translating techniques.

4.2.3 Pre-testing

“No matter how experienced the researcher and moderator or how thorough and conscientious the designers, it is impossible to predict in advance the way respondents will interpret and respond to questions” (Stewart & Shamdasani, 1990, p. 66). Therefore it is necessary to pre-test the questionnaire and interview questions. This will provide an opportunity to determine whether the wording of questions is appropriate and easily understood (Stewart & Shamdasani, 1990).

Pre-testing of the interview questions and the questionnaires will take place in Sepilok before beginning field research. This will be done in conjunction with pre-testing of the translator. A number of locals will be interviewed using the questions from the questionnaire as well as the semi-structured interviews. They will be asked to give feedback on the wording and appropriateness of the questions. The questionnaire and list of interview questions will then be modified if necessary. In addition to this, I am aware that during the first few interviews in the villages it may become apparent that certain questions need to be rephrased or deleted. This will be acted upon accordingly.

4.2.4 Approval

Before commencing my interviews, approval must be obtained from the Jawatankuasa Kemajuan Kampung (JKK), or Village Development Committee, as well as the Ketua Kampung (Head of Village) in each of the four villages. It is important for my community acceptance to go and personally meet and talk with the JKK, Head of Village, and the

police. Dr. Robert Ong will accompany me in these instances, introduce me, and explain my research intentions in order to minimise confusion.

4.3 Field validation of methodology

After arriving in Sabah and meeting with Dr. Ong at the study site, it became apparent that a number of political, cultural and geographic tensions necessitated significant changes to my proposed methods. Over-riding constraints that became immediately obvious were that of time and space.

The original aim of this study was to gain information on the impacts of tourism on the local communities in the Lower Kinabatangan River District. Due to time constraints it was decided to limit in-depth research to one village. Sukau was chosen as it is considered to be the 'hub' of tourism in the Kinabatangan. A more general comparison of selected features was also made during a site-visit to the village of Abai.

Lala (Rosalie Corpuz) was contracted by the SFD to translate between Bahasa¹¹ Malay and English (and vice versa) during the interviews and to supervise my research while I was in Sabah. However during the pre-test it became obvious that Lala was unable to translate during the interviews. Although Lala is a Sabahan, she had been educated in England and had only recently returned to live in Sabah. Because of this her English was exemplary, but her Bahasa was a little 'rusty'. Also, although Lala has had many years prior work experience in interviewing, she had never been trained in translation. For these reasons an alternative to *in situ* verbal translation had to be found. Note-taking during the interviews and having the digital recordings translated at a later date was opted for instead.

Following initial interactions with villagers I found it necessary to alter the methodology from group interviews to one-on-one interviews. Sukau is a very patriarchal society. Particular males would have dominated the group interview, and the females would have struggled to express their opinions as the women are generally not encouraged to think and share their own views. Sukau is also a hierarchal society where dominant members of the community voice their opinions and the others would be expected to agree or stay silent. In

¹¹ Bahasa Malaysia is the national language of Malaysia.

addition, government workers (who were amongst those who were to be interviewed) have to 'toe the line'. In group situations they would not be able to express their true opinion as they have to 'save face' in front of others. Also it would have been difficult to structure the group interview to encompass all of the types of situations in terms of tourism involvement in the village. Further, the logistics of organising group interviews would have been virtually impossible considering that it was difficult enough organising for one person to show up to an interview.

The original intention was to interview members of the community who are currently involved with tourism as well as those that are not currently involved in tourism. However, after a field visit from the 26th-28th June 2007 it became apparent that tourism involvement in the village had potential through the home-stay programme. After thorough investigations it was concluded that there were a total of 11 homes involved in the home-stay programme in Sukau. I aimed to have an equal number of interviews with those involved in the home-stay programme as those not involved in the home-stay programme. However it became extremely difficult towards the end of the study to find people who were interested in, and willing to be interviewed. The later interviews supported information already received in previous interviews, and new information was not forthcoming. For this reason I believe that an adequate number of interviews were achieved for the objectives of this study.

I initially planned on using a number of PRA techniques as part of my methodology for gathering information in the villages. Maps resulting from previous PRA research in the village were made available to me¹². However I did not find them to be useful for my study as they generalised the study area and were not descriptive. The NGO had provided monetary incentives for participants in the PRA research – therefore similar incentives would have been expected from me. Consequently, I decided that further use of PRA would not be an effective use of limited resources and did not pursue this method for gathering information.

Following field testing, the interview/questionnaire design was altered to allow for the nature of the Orang Sungai. I did this by using a Likert scale/tick boxes for many of the

¹² This research was carried out by WWF in 2003

questions to ensure the interviewees gave a considered answer, and then asked them to further expand on that response. The questions were kept simple as the interviewees tended to get confused with more complicated questions. During the initial interviews I noticed the interviewee's interest levels and attention waning towards the end. Therefore the interview length was kept as short as possible in order to maintain the interviewee's interest and concentration.

It became apparent during our field visit to Sukau on the 26th-28th June 2007 that there was no one central source of base-line information. Therefore Lala and I had to gather information from many different people during informal chatting. However as this information was often contradictory, we had to continually distil the information we received before we could feel confident of its reliability. This lack of clearly accurate and defensible base-line information took a disproportionate amount of time and effort during the research planning and delayed the research process.

It was very important to build good rapport with the community and interviewees. This was achieved by making ourselves known within the village, always being friendly and polite, and meeting with people a few times before interviewing them. Although this was extremely time consuming (and contributed to time constraints), it was important to the villagers culturally, and ensured that they were more comfortable with us during the interview. It was good to have the opportunity to meet with the interviewees beforehand and let them know what the interview would involve as it seemed to ease their uncertainties with the interview. We also made ourselves known to the NGOs which are active in the area, including WWF and HUTAN.

Substantial periods of time were spent finding willing interviewees, arranging times to meet, showing up to an abandoned interview, and then repeating that process. We found that it was very difficult to pre-plan our research as the locals did not keep to agreed times and dates.

4.4 Revised methodology

Given the conditions described above, my methods were modified to best suit the research environment.

4.4.1 Literature review and other secondary data collection

While in Sabah I became aware of additional issues that I was not previously aware of, therefore the extension of secondary data collection was important. I also had better access to locally produced literature and reports on relevant previous research. Additional literature was reviewed once back from my field work both in Vienna and Lincoln. Secondary data was collected via books, journal articles, internet searches, newspapers, and conferences.

4.4.2 Fulfilling protocol

The District Officer (DO) in Kota Kinabatangan was visited and permission was granted to undertake research in the Kinabatangan District. This was on the understanding that prior to beginning research, approval was also given by the JKK (Village Development Committee) as well as the KK (Head of Village) of each of the villages in which research was to be undertaken. As the research methodology originally included Batu Putih, Bilit, Sukau and Abai in this study, the JKK and KK in all four villages were visited. They were informed of the research and presented with a small gift. They were all very interested in the study and were eager for their village to be included. However as the modified methodology involved only two villages (Sukau and Abai), the JKK and KK in Batu Putih and Bilit had to be re-visited and informed that research would no longer be taking place in their village. The JKK and KK in Sukau and Abai were also revisited and their written permission was received (refer Appendices 4, 5 and 6).

4.4.3 Pre-testing

The questionnaire was pre-tested on two occasions. After the first pre-test two questions were omitted as they were already covered elsewhere in the questionnaire. The participant also suggested which questions should be worded differently to minimise misinterpretations, as well as suitable salary brackets for Q16 (refer Appendix 7). It

became obvious that the Likert scale and tick-box style questions worked well and did not hinder the flow of conversation during the interview. The questionnaire was modified and pre-tested for a second time. This proceeded smoothly and the participant was very enthusiastic and enjoyed the interview immensely. It was therefore indicative that the questionnaire was ready for use in the field.

It would have been ideal to pre-test the interview that was to be used with the villagers more than once. However the date and time of this interview was repeatedly changed by the interviewee, which set the rest of our research schedule back. The usefulness of the Likert scale and tick-box questions again became apparent during the pre-test. Still, the interview had to be continually modified during the research period as we became more aware of the issues in the village and the different situations in terms of tourism involvement. In hindsight it would have been better to pre-test the interview in Sukau itself. Yet I was hesitant to do this as the sample size in Sukau in terms of suitable people to interview was small.

4.4.4 Questionnaire survey of the lodges

Quantitative data collection included a questionnaire survey of the tourism lodges currently operating in the vicinity of Sukau (refer Appendix 7). There are currently six tourist lodges located in the area of Sukau. Prior to contacting the lodges to arrange an interview, all of the lodge owners were contacted and informed of the research. This included a formal letter and a facsimile (refer Appendix 3) from the Sabah Forestry Department, and was followed by a phone call to seek their permission to participate in the survey. After permission was received, direct personal contact was made with the lodges to arrange an interview with a suitable representative. Positive responses were received from five of the lodge owners; however a suitable interview date was unable to be arranged with one of the lodge representatives. Therefore a total of four lodges participated in the survey.

The survey involved a questionnaire which was filled out by myself during an informal interview with a representative of the lodge, who was either the owner or a senior manager. The interviews took place at the respective lodges at a date and time which best suited the representative, and occurred between July 17th 2007 and August 10th 2007. As the participants were fluent in English, a translator was not required for these interviews. The

questionnaire was filled out and additional notes were taken during the interview. The interview duration ranged from 39 minutes to one hour 14 minutes.

The final lodge questionnaire consisted of 45 questions; of which 33 were 'closed' questions and 12 were 'open-ended' questions. 'Closed' questions were primarily used in the questionnaire as it resulted in a structured response which could be analysed quantitatively. However the questionnaire was designed to enable a natural conversational flow, therefore the interviewee was also encouraged to expand on their response to the 'closed' question. Their in-depth views and opinions on the issue were generally shared with me in conversation, as their response to the closed question provided a platform for further discussion. A Likert scale format, which asked for the interviewees level of agreement to a statement was used in 11 questions, while tick-boxes occurred in a further 11 questions (refer Appendix 7). 'Open-ended' questions were utilised when their particular opinion on an issue was sought.

The interview allowed the lodge representative to expand on the information gathered and gave me the opportunity to further discuss points of interest and ask additional questions. The informal nature of the interview allowed the participant to relax and therefore be more forthcoming with their ideas and opinions. It also gave me the opportunity to explain occasional misunderstandings of the questions.

Prior to beginning the lodge interviews, the participant was informed of the purpose of the research, ensured confidentiality, and was reminded that they could chose to not answer a question if they did not think it suitable. Their written permission to undertake the interview was received and they were also asked if the interview could be recorded digitally (with all but one participant agreeing to this). The digital recordings were later transcribed, and this information was added to the tabulated information from the questionnaires, and analysed together (refer Appendix 8).

4.4.5 Interviews with members of the local community

A total of 19 semi-structured interviews were undertaken with the local villagers of Sukau. Of these 19 interviews, 11 involved those in the home-stay programme (100 per cent of the total home-stay participants), while eight interviews were with villagers who were not

involved. Two separate interview structures were used: one titled 'Involved in tourism', while the other was titled 'Not involved in tourism'.

There were a number of different situations within the home-stay sector, i.e. some home-stays no longer received guests, and some were not registered. Hence it was obvious that one generic interview structure was not going to enable us to ask the most appropriate questions for all of these cases. Therefore the 'Involved in tourism' interview was restructured and split into two options: one if the interviewee is also involved in tourism other than the home-stay programme; and one for those only involved in tourism through the home-stay programme. Those that came under the second option were further split into three more sections: 1) has not yet received guests; 2) received guests in the past; 3) currently receiving guests.

The method used before an interview occurred was generally as follows:

- 1) Meet the potential interviewee, introduce ourselves and explain our research to them.
- 2) Meet with them again to arrange an interview day and time that suits them best (but not too many days in advance, i.e. a maximum of three days, or else they tended to forget).
- 3) Telephone the interviewee to remind them of the interview (if possible).
- 4) Turn up at the arranged place on the settled day at the agreed time.

The interviews usually took place at the interviewees' home. However the offices at KOCP and the veranda of the B&B were also common interview settings. The semi-structured interviews were undertaken in a relaxed and comfortable manner with food and drink being shared. A box of biscuits and a small souvenir from New Zealand was presented to the participant as a token of thanks prior to the start of the interview. Preceding the interview, the interviewee was informed of the purpose of the research, ensured confidentiality, and reminded that it was not compulsory to answer any particular question. Their permission to record the interviews digitally was also sought, with all but one participant agreeing.

All of the interviews with the local villagers began by filling in a table about the members of their household. This offered demographic information, providing us with background

on their family situation which could affect the rest of the interview, and acted as a good ‘icebreaker’.

The ‘Not involved in tourism’ interview had eight subsequent sections: introductory questions; economic impacts of tourism; environmental impacts of tourism; socio-cultural impacts of tourism; training and development; infrastructure; the future of tourism; future alternatives (refer Appendix 9). These interviews tended to be less demanding than the ‘Involved in tourism’ interviews. The eight interviews ranged in duration between 35 minutes and 65 minutes. The ‘Involved in tourism’ interview had two additional sections: other involvement in tourism; and home-stay questions (refer Appendix 10). These 11 interviews ranged in duration between 20 minutes and 77 minutes.

The interview structure was developed over an extended time period and was continually modified during the research period. A combination of ‘closed’ and ‘open-ended’ questions were used in the interviews. Although encouraging a good flow of conversation was an essential part of the interview design, it became apparent that the interviewees often required a lot of prompting in order to express their thoughts and opinions. Therefore Likert-scale and tick-box questions were used throughout the interview. This encouraged a response to the question and the interviewees were then probed to expand on or explain that response. This interview style was chosen as it suited the nature of the interviewees the best, and it appeared to give them more confidence as they were selecting an answer that was already provided. Attempts were made to keep the interview length as short as possible as attention spans noticeably waned towards the end of the interviews.

For all interviews, cards were used for ranking in two of the questions. This provided a change of pace in the interview which was good for waning attention spans, provided Lala with an intermission, and enabled me to get more involved in the interview. The response to this technique was extremely positive and tended to encourage further comments and conversation.

The interview questions were printed out with the English version on the left-hand column and the Malay translation of the questions on the right-hand column. The interview was undertaken entirely in Malay. The main points of the interviewees’ responses were

recorded by both Lala and I¹³ by hand during the interview. This ensured that information would not be lost in case of problems with the digital recording. As Lala wrote her notes in English, I was able to read off her notes and be able to understand the essence of the discussions more easily. This allowed me to pose further questions if I felt it necessary, however Lala tended to probe and prompt the interviewee adequately and suitably.

4.4.6 Key informant interviews

A total of six informal key informant interviews also took place during the research period in Sukau. These included members of local NGOs (WWF, HUTAN) as well as people involved in the local tourism industry.

4.4.7 Observations

During the research period I stayed in Sukau for 28 nights, which provided me with the opportunity to participate in village life and make personal observations. This enabled a better understanding of the complex situation in Sukau in terms of conservation, livelihood and tourism. Site visits were also made to the other villages along the Kinabatangan that are currently involved in tourism (Batu Putih, Bilit and Abai). This included one overnight stay in Bilit, and a two-night stay in Abai. Hence I was able to compare the community involvement in tourism in these villages with that in Sukau.

4.4.8 Site visit: Abai

A site visit was made to Abai on the 23rd-24th August 2007. As time constraints meant that in-depth research was not able to be undertaken in Abai, it was decided that a general comparison of the community's involvement in tourism would be done instead. This was achieved by staying for two nights in an Abai home-stay and interviewing Rukee, the assistant JKK, home-stay coordinator, and tourism activities coordinator. This was an extensive semi-structured interview. Additionally we participated in a number of tourist activities such as tree planting, culture show, and village walks. We observed village life including attending a wake, preparing meals, sharing other household chores, and eating

¹³ As I lived in Indonesia for a number of years as a child, I have a basic understanding of Bahasa Indonesia – which is very similar to the dialect of Bahasa spoken in Sabah.

with the family. This enabled us to make personal observations which supported the information provided by the key informant.

4.4.9 Translations of the interviews with villagers

Because the interviews were not able to be translated *in situ*, one of the major challenges in this study was in finding a suitable translator to translate the digital recordings of the village interviews from Bahasa into English. Precise translations of these interviews were critical for doing a sound analysis of the information received during the field work. While in Sabah I was unable to find a suitable translator who had the time available to assist me.

A major problem was highlighted during a ‘test’ translation performed by a Malaysian national studying at Lincoln University. The Sabahan dialect of Bahasa is quite different from that which is spoken in Peninsula Malaysia, and tends to be more closely related to the Bahasa spoken in Indonesia. Because of this, the translator (who was from Peninsula Malaysia) was only confident that he could translate 80 per cent of the interview. It was therefore obvious to me that using a translator from Sabah would be essential to ensure the accuracy and detail of the interviews.

After seeking assistance from a number of contacts, I was given numerous offers to help with the translations. I opted for the services of two translators as I was aware that things can be interpreted in different ways which can skew their original meaning. However only Osmawani followed through with the translation work in a professional manner. Osmawani is the secretary for the Malaysian Embassy in Vienna, and her translation services were offered by the embassy free of charge for the purpose of my thesis. The translations were undertaken in Vienna, Austria, over a period of four months between February-June 2008.

The interviews to be translated were put on a memory card that was inserted into a digital recorder. The interviews were then able to be played-back. After listening to a sentence of the interview in Bahasa, Osmawani stopped the recording, and inserted a recording of her English translation by speaking into the recorder. After receiving the translated interview, the English version was transcribed onto computer and analysed with the rest of the information gathered (refer Appendix 11).

4.5 Problems and constraints of the methodology

As with most research there are a number of identifiable problems and constraints with the methodology used in this study. There are problems associated with doing field work in a foreign country, and undertaking research as an obvious ‘outsider’. I encountered language constraints due to my lack of fluency in Malay; cultural differences which had to be taken into account during all stages of the research; and religious and societal differences which limited my acceptance as a female researcher. It is therefore possible that some important information was not available to me during the research process.

Precise translations of the villager’s interviews from Bahasa Malay into English were critical. As previously mentioned, *in situ* verbal translations during the interviews were not possible, and instead the digital recordings of the interviews had to be translated at a later date. The major disadvantage in this methodological adaptation was that I wasn’t as engaged in the interview process to the extent I would have been if I was able to probe and prompt the interviewee to expand on their thoughts and responses to questions during the interview. It also meant that I was unable to follow up on any subtleties which came up during the interviews while I was still in the study area. However a positive attribute of this methodological adaptation was that the flow of dialogue during the interviews was not obstructed, and the interviewee did not have to wait (and potentially be made to feel uncomfortable) while their response was being translated into English. It also meant that the duration of the interviews was not prolonged. This was an important factor identified early-on in the research period in terms of avoiding waning attention spans. Also, although personally I often was unable to probe and prompt the interviewee effectively, I did have confidence in Lala’s interviewing abilities (through her prior work experience) to effectively probe and prompt the interviewees when necessary.

Undertaking research in Sukau as an obvious ‘outsider’ was not ideal. Fortunately my research was supported by the Sabah Forestry Department (SFD). This not only provided me with valuable logistical support, but gave my research authority which without doubt resulted in a higher level of interest and participation by both the lodges and villagers. Although my research would have been very difficult without this assistance, it did result in less flexibility. Proper SFD protocol always had to be followed which included using

SFD vehicles and drivers. Therefore we had to fit in around the availability of the SFD vehicles and drivers, which affected when we were able to go to Sukau, and how long we could stay in the village at any one time. Furthermore the Orang Sungai do tend to be intimidated by Orang Putih ('White People') as they generally see them in positions of power, or as 'rich' tourists. Hence I was very fortunate to have been provided with Lala to assist me in my research, which also provided a 'local face' for the villagers to identify with. Yet this resulted in two females undertaking research in a patriarchal society. Although we tried to counteract this gender prejudice by establishing good rapport with the community, it meant that our research was not taken as seriously by some members of the village community than if we had been males.

We decided to stay at the B&B which is located a half-hour walk from the centre of Sukau village. As we didn't have a vehicle (while we were in the village) we had to walk into town frequently for research purposes. This was extremely tiring in the heat of the day and restricted the number of interviews that we could do in one day. However this did have its benefits for creating good rapport with the community as the locals along the main road saw us often, and hence became aware of us.

One of the biggest struggles during the field research was actually obtaining an interview. As previously mentioned, a lot of time was invested in finding a willing interviewee, and then coordinating an appropriate interview time and setting. It was obvious that we couldn't 'force' people to be interviewed, and we had to be able to fit in around other people's schedules. Unfortunately however, at least half of the times after establishing an interview, the interview still didn't happen. Although this process was tiring and time-consuming, it was still considered to be the best approach in the social and cultural context of the area, for building good rapport with the potential interviewees, and for scoping out the interviewees situation so that the appropriate interview structure could be selected.

In summary, my proposed research methodology had to be adjusted in a number of ways once I became more aware of the contextual realities of the study area. It would have been valuable to have had more time to re-think and re-adjust my research plan while in the field. I needed more time than the six days allocated to effectively scope out the issues in terms of conservation, livelihoods, and tourism in the village. Additionally, the two weeks that I had set-aside for planning the field research before beginning my fieldwork was

inadequate. Five weeks would have been better. Although I had pre-planned my research, in hindsight I also had to allow time for re-planning the research.

5 Results and Discussion

The following chapter presents and discusses the results from the field research in Sukau. Information was gathered via structured questionnaires and interviews with the lodges, 19 semi-structured interviews with the local villagers of Sukau, and six informal interviews with key informants in the area. The information gathered from these sources is further strengthened by my own personal and participatory observations.

A short-coming of the results is that only four out of the six lodges in Sukau agreed to participate in the research. The four participating lodges are coded as L1, L2, L3, and L4 for the purposes of this thesis. In some instances an attempt has been made to estimate some aspects of the other two lodges when personal observations have deemed this possible¹⁴. However no claims can be made that these results are other than indicative for all lodges. Some of the questions were clearly misunderstood by the lodge representatives (e.g. Q34 issues with local participation), while much prompting was required for other questions (e.g. Q39 and Q40 – locally sourced goods and materials). Where the reliability of some of the results is questioned, this is indicated in the text.

Due to the differing backgrounds of the villagers, not all of the questions were presented to all participants. There were differing levels of enthusiasm received from the villagers about being interviewed. In general those who were not involved in tourism were more enthusiastic during the interviews. However it was also more difficult to find willing participants in this group. A reason for this could be that 100 per cent of all home-stay operators were interviewed, whereas the interviewees who were not involved in the home-stay were selected by ‘snowball sampling’. There were also differing levels of the amount of thought put into the responses. The home-stay operators who were less educated and less involved in the home-stay programme tended to give less thoughtful answers.

5.1 Sukau village

Sukau is a small village surrounded by the Kinabatangan Wildlife Sanctuary and numerous palm oil plantations. In terms of infrastructure, the village is not very developed

¹⁴ From my observations, the two non-participating lodges were not too dissimilar to L2 and L3 in terms of marketing and popularity.

(Photograph 4). There is still a lot of natural secondary vegetation alongside the road heading to the Bed and Breakfast (B&B) (refer Figure 7); however this had noticeably decreased even during the study period.



Photograph 4. Sukau village centre with a view of the primary school (blue building).

Recently a census of the village was undertaken by an employee of WWF. A map (Figure 7) was drawn of the village and the number of homes and inhabitants of each residence was identified. The village was divided into 13 parts, and a total of 243 homes and 1,159 inhabitants were recorded. In addition, six lodges (refer page 82) with 127 live-in staff were noted. A number of homes and two lodges are located on the southern side of the river, and access between these and the rest of the village is only possible by boat. The census included the site of the Local Community Resettlement Programme (PPMS). This is a government scheme which provides cheap housing to those living in poverty. The PPMS is located alongside the main road prior to arriving in Sukau proper. Sixty-six homes and 283 inhabitants were recorded in this part of Sukau.

Map of Sukau Village

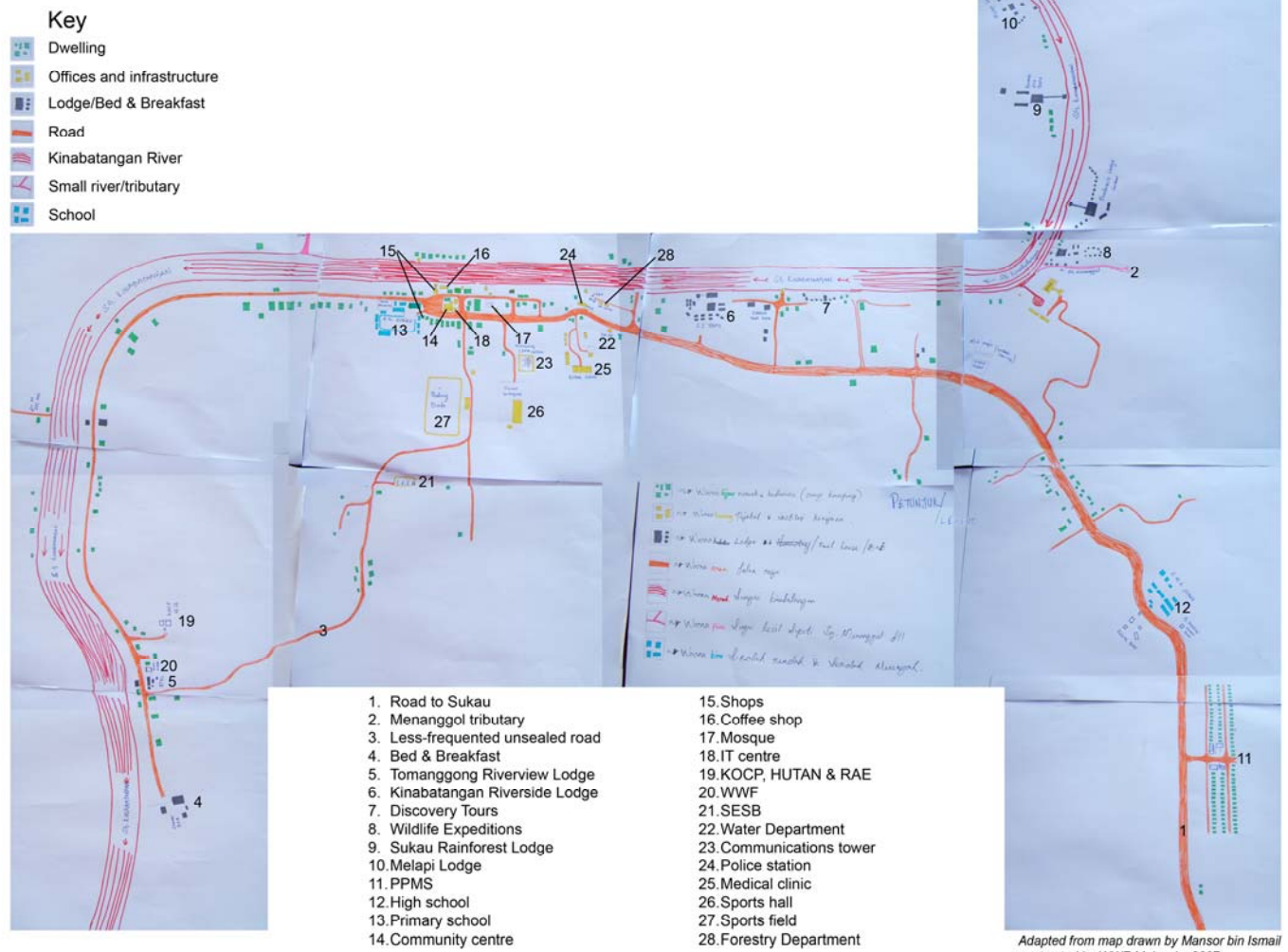


Figure 7 Map of Sukau Village.

The houses in Sukau are generally built of unpainted wood and covered with corrugated zinc roofing. They are large and roomy with high ceilings (Photograph 5). For those houses located next to the river, the bathroom, laundry and boat landing stage is all located on the river's edge (Photograph 6). Usually reached by solid wooden planks laid on the river bank, this structure consists of two or three massive logs kept in position by wires or rope. A small wooden shed with a partially planked floor sits astride the logs and serves as the washing area and toilet with the waste going directly into the river. The village does not have a clean water supply and the majority of the villagers rely on the river water for their everyday needs. Most of the homes have gardens containing flowers and fruit trees, and there are also a number of smallholder palm oil plantations on the periphery of the village. Fruit trees are also commonly located alongside the roadside and river edge which often results in sightings of monkeys and other wildlife such as hornbills. Animals (both domesticated and wild) are plentiful in the village, and cats, dogs, chickens and goats tend to roam freely.



Photograph 5. Typical house in Sukau (this house is also a home-stay).



Photograph 6. Local bathroom, laundry and boat landing stage.

5.2 **Key stakeholders**

There are a number of key stakeholders involved in the management of the Kinabatangan Wildlife Sanctuary and tourism development in Sukau. Although the following may not be an exhaustive list, the following stakeholders were actively involved during the research period in Sukau.

5.2.1 Sabah Forestry Department

The Sabah Forestry Department (SFD) manages the forest reserves in the area, and is therefore a key stakeholder in the protection of the Lower Kinabatangan. They have an office in Sukau village (refer Figure 7). The mission statement of the SFD is:

“to effectively and efficiently manage the state’s forest resources in accordance with the principles of sustainable forest management” (Sabah Forestry Department, 2007b).

In accordance with this, the SFD are investigating alternative uses of their forests. Within the SFD is the Forestry Research Centre which is based in Sepilok. They have a tourism sector whose objectives include determining the economic impact of tourism in Sabah, and an assessment of tourism or ecotourism potential in Sabah Forest Reserves (Sabah Forestry Department, 2005e).

5.2.2 Sabah Wildlife Department

The Sabah Wildlife Department (SWD) is responsible for the implementation and administration of the Sabah Wildlife Conservation Enactment, 1997. Under this enactment, the SWD is therefore accountable for the Kinabatangan Wildlife Sanctuary (Sabah Wildlife Department, 2004). As well as managing the Wildlife Sanctuary, the management of swiftlet nest collection at Gomantong is also the responsibility of the SWD (Payne, 1989). The objectives of the SWD are focused on conserving nature and natural habitats, and managing these resources for the benefit of the people of Sabah in particular (Sabah Wildlife Department, 2004). The SWD are being increasingly called-upon to help with human/wildlife conflicts in and around Sukau, yet they do not currently have an office in Sukau village.

5.2.3 Ministry for Tourism Development, Environment, Science and Technology

The Ministry for Tourism Development, Environment, Science and Technology’s involvement in the Kinabatangan is two-tiered. Firstly they are responsible for encouraging and promoting the orderly development of the tourism industry in the State, while

protecting, conserving and preserving the natural beauty of the environment by ensuring that development activities do not cause environmental degradation which may threaten the State's well being, as well as endanger the wildlife and flora. Their vision in achieving these missions is to "make Sabah the premier nature tourism destination, a clean and healthy environment and a well maintained natural heritage and biodiversity" (Ministry of Tourism Culture and Environment Sabah, 2008). Secondly, they administer the Sabah Wildlife Department which is responsible for the KWS under the Sabah Wildlife Conservation Enactment, 1997.

5.2.4 HUTAN, KOCP, RAE

In 1998, a French NGO (HUTAN) established the Kinabatangan Orang-utan Conservation Project (KOCP) in collaboration with the Sabah Wildlife Department. The goal of the project is to achieve long-term viability of orang-utan populations in Sabah. To achieve this they hope to restore harmonious relationships between people and the orang-utan, which in turn will support local socio-economic development compatible with habitat and wildlife conservation. HUTAN's priority is in nature conservation and providing work opportunities for the locals. For this reason, HUTAN has decided to work independently from the lodges whose main priority is economic profit (M. Ancranaz, personal communication, July 12 2007).

A concept for a community-run ecotourism project was developed by the Sabah Wildlife Department. Consequently Red Ape Encounters (RAE) was established in October 2001 when SWD signed with KOCP. Although KOCP work closely alongside RAE, financially they are independent. In 2004 RAE became a fully licensed inbound tour operator under the Ministry of Environment. Along with MESCOT in Batu Putih, RAE are the only operators who have permits to take tourists into the Wildlife Sanctuary. Other tour operators such as the lodges are restricted to the waterways and private land. The accommodation provided by RAE is that of the village home-stays.

5.2.5 WWF

WWF-Malaysia was established in 1972, and since then has been working towards biological diversity conservation and advocating for sustainable use of natural resources.

Scientific research by WWF and other organisations produced convincing evidence of the Lower Kinabatangan's importance for species conservation, and it was WWF which proposed to the State government that an area of the Lower Kinabatangan be protected. A WWF study of the tourism potential of the area in 1989 revealed exceptional potential and helped to endorse the concept of a wildlife sanctuary (Payne, 1989; Vaz, 1993).

WWF are currently involved in a 13 year project in the Kinabatangan which began in 1998 and is expected to continue through to 2010. This 'Kinabatangan Corridor of Life' programme was formerly known as 'Partners for Wetlands', and has four distinct phases. Phase One largely consisted of data collection and base-line studies. In 2001 there was a tourism forum in Kota Kinabalu to set a direction for tourism in the Kinabatangan. During Phase Two WWF focused on tourism as an alternative livelihood for local communities. The home-stay programme was developed in four villages along the Kinabatangan (Batu Putih, Bilit, Sukau, Abai), and they facilitated training workshops and certifications. Most of the home-stay training took place in 2003, and during this time, WWF also helped the local home-stay operators to facilitate contacts with tour operators. There was a change of focus for WWF during Phase Three on obtaining land for reforestation and conservation. The focus on tourism and alternative livelihoods decreased, and the standard of the home-stays dropped during this time. WWF are currently in Phase Four of the project which was restructured to meet targets which focussed on alternative livelihoods and continuous protection. This includes ensuring continuous forest with good water quality, sustainable development (tourism and agriculture), the development of a Kinabatangan Tourism Management Plan, and establishing a Lodge Association (J. Majail, personal communication, July 31 2007). An important focus of Phase Four includes negotiating with oil palm companies and landowners to set-aside sections of their land to serve as wildlife corridors. Currently this is voluntary, however WWF are attempting to influence government policy to make this a legal requirement. WWF are also hoping that a government policy will be introduced which restricts forest clearance on private land due to its conservation value.

WWF-Malaysia is still very much involved in tourism and nature conservation in Sukau, and has an office in the village. WWF are currently trialling a Voluntary Conservation Levy (VCL). The purpose of this is to encourage tourists to contribute to on-going wildlife protection and conservation in the KWS. The levy is to assist the SWD protect the KWS

against illegal poachers and loggers with on-going patrols. Five lodges in Sukau are currently participating in the trial. WWF contracted a specialist (Dr. Janet Cochrane) in May 2007 to draw up a Tourism Master Plan for the Kinabatangan District. This was deemed necessary as the lodges and villages are located outside of the Wildlife Sanctuary, therefore there was a need to look at the area more holistically. However this document is yet to be published.

5.2.6 Sabah Home-stay Association

As previously mentioned, a home-stay programme was developed in Sukau (as well as Batu Putih, Bilit and Abai) under the guidance of WWF in 2003. The Sabah Home-stay Association was established in 2004. It is now compulsory that all home-stay programmes in Sabah must register their membership with the Sabah Home-stay Association and pay the annual membership fee. An inspection of the home-stay household is carried out, and if the home meets all requirements and conditions then the application is forwarded to the Federal Ministry of Tourism (MOT) for the final certification process (Sabah Home-stay Association, 2008). The website of the Sabah Home-stay Association provides information on the current home-stay programmes, their contact details, and links to the individual programmes websites where available.

All of these stakeholders are responsible in different ways for managing the KWS and tourism development in Sukau. Yet within the government departments in particular, there is sometimes uncertainty as to who exactly is responsible for what. For example the SWD does not have full jurisdiction over the protected areas of the KWS as the forest reserves are the responsibility of the Forestry Department. This currently hinders effective management of the KWS and tourism development in Sukau.

5.3 Tourism services in Sukau

5.3.1 Lodges in Sukau

There are six tourist lodges currently operating in Sukau (Refer Figure 7) – Sukau Rainforest Lodge; Discovery Tours; Melapi Lodge; Kinabatangan Riverside Lodge; Tomanggong Riverview Lodge; Wildlife Expeditions. These lodges are concentrated along a 1.5 km stretch of the Kinabatangan River upstream from Sukau. The Menanggol River is

situated amongst the lodge sites. The tourist lodges are basic and their designs blend well into the context of the environment. All of the lodges currently provide similar services for tourists, and tend to promote their ‘packages’ which are all inclusive of accommodation, meals, river trips, a jungle walk, and transportation.

Discovery Tours

Discovery Tours opened their lodge in Sukau in 1994, and currently have eight chalets.

Kinabatangan Riverside Lodge

The Kinabatangan Riverside Lodge is owned and operated by Special Interest (SI) Tours, who also have recently opened a lodge downstream in Abai. The lodge in Sukau was first opened in 1994 and now has 33 rooms with a capacity for 80 people.

Melapi Lodge

Melapi Lodge was opened by Sipidan Dive Centre in 2006, to replace its previous lodge – Proboscis Lodge, which suffered due to continual flooding.

Sukau Rainforest Lodge.

Borneo Eco Tours opened Sukau Rainforest Lodge in May 1995. The lodge currently has 20 rooms, however it has plans to expand a further 10 rooms, to cope with increasing demands from tourists.

Tomanggong Riverview Lodge

Tomanggong Riverview Lodge has been run by North Borneo Safari since 2004, however the land and infrastructure is leased from a local family. This lodge is located downstream from Sukau village and consists of ten rooms.

Wildlife Expeditions

Wildlife Expeditions established its lodge in 1991 and in doing so were the first tour operator to open a lodge in Sukau. They now have two lodges; the original includes chalets and the main building at the junction of the Menanggol river, while the more recent one is a ‘kampung’ (village-style) house located at the end of the small lane next to SI Tours lodge.

5.3.2 Home-stay programme.

The home-stay programme in Sukau was established by WWF in 2002. They facilitated training workshops and certifications for five home-stay operators; however the programme now operates independently from WWF. There are currently 11 homes involved in the home-stay programme (to differing degrees) in Sukau.

The home-stays receive independent travellers who arrive in Sukau and look for a place to stay. The home-stay programme also receives bookings through Red Ape Encounters (RAE) who utilise the home-stay service, and is marketed accordingly on the internet.

Guests are provided with their own bedroom which is basic but comfortable. It tends to consist of a bed with linen, mosquito net, and a small table. The bathroom facilities are shared with the family. This includes a local style squat toilet (which discharges into the river), and a ‘mandi’ – a local style shower where the water is thrown over yourself with a small bucket.

5.3.3 Bed and Breakfast

One of the initial home-stay operators, who received training from WWF, moved his family from their home in the village and expanded their home-stay business into a Bed and Breakfast (B&B) (Photograph 7). He purchased two hectares of land in 1999 for RM 17,000. At that stage the land was covered in forest and there was no infrastructure, road access, or electricity. Savings collected from his previous livelihoods such as fishing and shop keeping was used to pay for the land; however RM 30,000 was loaned from the bank to pay for the buildings.



Photograph 7. Sukau B&B.

5.4 Peak season

Lodges

The peak tourism season for the lodges in Sukau is from July – September. This corresponds with the European summer holidays, and the dry-season in Sabah which enables better conditions for wildlife viewing. L2 reports that it averages about 80 per cent occupancy during this peak season. However L4 state that they are always busy as they have group bookings (usually older clientele from Europe) during the ‘low season’ of September through to May.

Home-stay and B&B

The busiest tourist months for the home-stay and B&B in Sukau are June-August. This corresponds with the peak tourist season for the lodges in Sukau. However even during the peak season, guest nights at the home-stays are infrequent.

RAE

Guests nights with RAE are also infrequent, and they only operate for ten months every year due to floods during the rainy season.

5.5 Number of guest nights

Lodges

Table 2. Number of guest nights at the lodges

Lodge	Number of guest nights (2006)
L1	2,190 ¹⁵
L2	10,950 ¹⁶
L3	12,866 ¹⁷
L4	10,950 ¹⁸
Total	36,956

Table 2 shows that the total number of guest nights in 2006 for the four lodges surveyed were approximately 36,956. In estimating the number of guest nights for all six lodges in Sukau in 2006, the two un-surveyed lodges were both given the average value of the estimated guest nights of L2 and L3 (11,588). Hence it could be estimated that the six lodges in Sukau had approximately 60,000 guest nights in 2006.

Home-stays

There are currently five home-stays in Sukau which are open to receiving guests. These five home-stays have a combined capacity of 18 guests at any one time.

The question of how many guest nights they had in 2006 was a little confusing for the respondents. Unfortunately neither the home-stay operators nor the secretary keep any written records of the home-stay guests. Yet it is still apparent that home-stay guests in Sukau are low in number.

¹⁵ L1 has 10 rooms with two beds per room. By observation they are not as busy as the other lodges in Sukau, and I have estimated their average occupation rate to be 30 per cent. Estimating L1's total number of guest nights in 2006: 20 people x 365 days = 7,300. 30 per cent of this is 2,190.

¹⁶ L2 has 20 rooms with two beds per room. The lodge manager stated that their average occupancy rate for 2006 was approximately 75 per cent. Estimating L2's total number of guest nights in 2006: 40 people x 365 days = 14,600. 75 per cent of this is 10,950.

¹⁷ L3 has a maximum of 47 guests at any time (Proboscis Lodge, 2008). By observation they have a similar occupancy rate as L2 (approximately 75 per cent). Estimating L3's total number of guest nights in 2006: 47 people x 365 days = 17,155. 75 per cent of this is 12,866.

¹⁸ L4 has 30-40 guests everyday. Estimating L4's total number of guest nights in 2006: 30 people x 365 days = 10,950.

The home-stay operators do recall that there were the most guests in 2003 and 2004. One of the home-stay operators stated that she had 100 guests (not guest nights) in 2003. The home-stay operators say that there was more promotion of the home-stay programme by WWF during these two years, while promotion is now only through personal recommendations from previous guests. There was a reduction in guests in 2005. One of the operators said that they received about forty guests that year. There were even fewer guests in 2006 because of flooding.

B&B

The B&B started to receive guests in 2003 and now has bed space for up to 25 people. The B&B didn't have many visitors when it first opened as tourists were not aware of their existence. To solve this problem the owners produced a brochure which is now in tourist information centres. The B&B now features in the Lonely Planet Guide, and has become better known to travellers. The B&B has started receiving more business since the beginning of 2006. The owners say that they had about 100 guests that year. However 2007 saw a real 'boom' in guest arrivals. Yet guest nights are still not consistent, and there is a seasonal fluctuation. During the low season (November/December) it is not uncommon for the B&B to have only two guests in a month. The manager believes that marketing is still a problem – it is difficult to compete with the lodges in marketing and promotion.

RAE

RAE has a policy that they will not accept more than 1,000 guests per year in order for it to remain low-impact. However currently their guest numbers are much lower than this; in 2006 they had 167 guests.

Table 3. An estimation of guest nights in Sukau in the year 2006.

Accommodation	Number of guest nights
L1	2,190
L2	10,950
L3	12,866
L4	10,950
Unsurveyed lodge	11,588
Unsurveyed lodge	11,588
Home-stay	267 ¹⁹
B&B	100
TOTAL	60,499

It is estimated that approximately 60,500 tourists stayed in Sukau in 2006 (refer Table 3). This figure is calculated with the best evidence available.²⁰ A significantly high percentage of these visitors (99 per cent) stay at a lodge, rather than a home-stay or the B&B. The majority of visitors to Sukau are non-Malay.

However it is likely that the current financial crisis (2008-9) will affect tourism growth in Sukau. The global tourism industry suffered a marked downturn in activity in the second-half of 2008 and indicators suggest that the downturn will continue through 2009 (World Travel and Tourism Council, 2009).

5.6 Tourist services

Lodges

All of the lodges in Sukau currently provide similar services for tourists. They tend to promote their ‘packages’ which are all inclusive of accommodation, meals, river trips, a jungle walk, and transportation, as this way they “*can get more money from the tourists*” (L3 Management representative). L2 has gone a little further than the other lodges in also offering an elevated boardwalk, as well as tree planting at an oxbow lake.

¹⁹ 167 guests were received from RAE. I have estimated that an additional 100 independent travellers stayed at the home-stays in 2006.

²⁰ As previously mentioned, the number of visitors to Sukau was approximately 13,000 in the year 2000. This would indicate an increase in visitor numbers of 465 per cent between 2000-2006. Over the same period, Sabah tourist arrivals increased by 270 per cent from 774,475 to 2,091,658 (Sabah Tourism Board, 2008b). Hence it could be assumed that a realistic increase in visitor arrivals to Sukau is likely to be within the range of 270 per cent and 465 per cent. Taking into consideration the increased popularity of Sukau as a tourism destination within Sabah during this time, I believe that this higher figure is plausible.

Home-stay

The home-stays provide accommodation and breakfast, with meals readily available. They also help to organise river cruises and/or guides for their guests when requested.

B&B

The Sukau B&B offers similar services to the lodges. They provide accommodation and breakfast, main meals, and river cruises. They also advertise jungle trekking, but this is self-guided. They do not have ‘packages’.

RAE

RAE offers two overnight package tours, as well as a number of half-day optional tours. Both packages include home-stay accommodation, meals, return transfer from Sandakan airport to Sukau, the entrance fee to the Orang-utan study site, and a specialised guide. The three days and two nights ‘Discovery Package’ also includes two afternoon river cruises, one morning cruise to the oxbow lake, and the entrance fee to Gomantong Caves. The four days and three nights ‘Orang-utan Package’ also includes one morning cruise to the oxbow lake, one afternoon cruise, one evening cruise, and the entrance fee to Sepilok Orang-utan Rehabilitation Centre.

The Sabah Tourism Master Plan recommended that tourism in Sukau should not be based on further lodge development. Rather it suggests that tourism should be spread along the Kinabatangan River using various styles of tourist boats, including house boats. Although the number of lodges in Sukau has not increased since the Plan was written, tourism in Sukau is still lodge-based. Hence it is clear that this recommendation has not been implemented.

5.7 Prices

Lodges

L1 charges approximately RM 200²¹ for a package. L2 quoted a package walk-in rate of RM 255. However their internet rates are much higher. Two days and one night package is RM 900, while their three days and two nights package is RM 1280. L3 quoted a package walk-in rate of RM 260. Their internet rate of a two days and one night package is RM 675. L4 stated that each guest spends approximately RM 300-500. However their internet rate for a two day and one night trip is quoted as being RM 798. It is apparent that the lodges do not like to publish their rates. Up front answers to this question were avoided during the interviews and their rates have not been published in travel guides such as Lonely Planet. In turn this allows the lodges to maintain flexibility with their charges.

Home-stay

The current home-stay charges in Sukau are RM 20 per person per night. This includes breakfast which is generally sweet black coffee, fried noodles, and a deep-fried sweet 'treat'. Lunch and dinner cost an additional RM 10 and are cooked by the home-stay host. The meals tend to consist of white rice and three different dishes – usually vegetables, chicken, or prawns, most often cooked in a curry sauce. Five Ringgit from every home-stay guest night is currently put into a home-stay fund. The intention of this money is that it is available for the home-stay operators to make necessary improvements to their home-stay business. There has been no price review since the home-stay programme was first established.

B&B

A room at the B&B (inclusive of breakfast) is RM 40 per night. However the room is able to sleep two people which can reduce the price to RM 20 per person per night. Lunch and dinner consists of two to three dishes with rice and is priced at RM 10 per meal. Camping is also possible on the grounds of the B&B. River cruises are operated by the teenage son, and guests are charged between RM 70-100 (depending on destination/length of trip) per boat, with a maximum boat capacity of six passengers.

²¹ All lodge rates are per person per night, twin share.

RAE

RAE currently charges RM 1,115pp for its three days and two nights ‘Discovery Package’, and RM 1,300 for its four days and three nights ‘Orang-utan Package’. The accommodation provided by RAE is home-stays in the village. Although this is undoubtedly a richer cultural experience than staying in a lodge, it may not have the same levels of comfort. On the other hand, the RAE guides are very well-trained by KOCP and are able to provide interesting local insight.

The prices of the tourist services in Sukau are presented below in Table 4.

Table 4. Price of tourist services in Sukau

Tourist service	Price
L1	RM 200*
L2	RM 900*
L3	RM 675*
L4	RM 798*
Home-stay	RM 40**
B&B	RM 40**
RAE	RM 1,115*

* Package

** Assuming that lunch and dinner are also purchased

All prices mentioned in Table 4 are per person per night, on a twin-share basis. The prices charged by the home-stays and B&B are markedly lower than those charged by the lodges and RAE. However the lodge and RAE prices are all inclusive of accommodation, meals, river trips, a jungle walk, and transportation, whereas the home-stay and B&B prices only include accommodation and meals.

5.8 Minimum cash inflow from tourist activities in Sukau

Table 5. Cash inflow into Sukau through tourism activities in 2006.

Tourist service	Number of guest nights	Price	Gross income
L1	2,190	RM 200	RM 438,000
L2	10,950	RM 900	RM 9,855,000
L3	12,866	RM 675	RM 8,684,550
L4	10,950	RM 798	RM 8,738,100
Unsurveyed lodge	11,588	RM 788**	RM 9,131,344
Unsurveyed lodge	11,588	RM 788**	RM 9,131,344
Home-stay	100*	RM 40***	RM 4,000
B&B	100	RM 40***	RM 4,000
RAE	167	RM 1,115	RM 186,205
TOTAL	60,499		RM 46,172,543

* Without RAE guests

** The average price of L2 and L3

*** Boat trips not included in these prices

Table 5 shows that in 2006 the estimated minimum cash inflow through tourism activities in Sukau was RM 46,172,543. An estimated RM 45,978,338 (99.6 per cent) of this was via the lodges. Therefore it is unclear as to how much of this money remained within the village.

5.9 The current stage of tourism development in Sukau

When tourist lodges were developed in Sukau in 1991, the area became more accessible to tourists. This resulted in a marked increase in visitor numbers from 13,000 in the year 2000 to 60,500 in the year 2006.

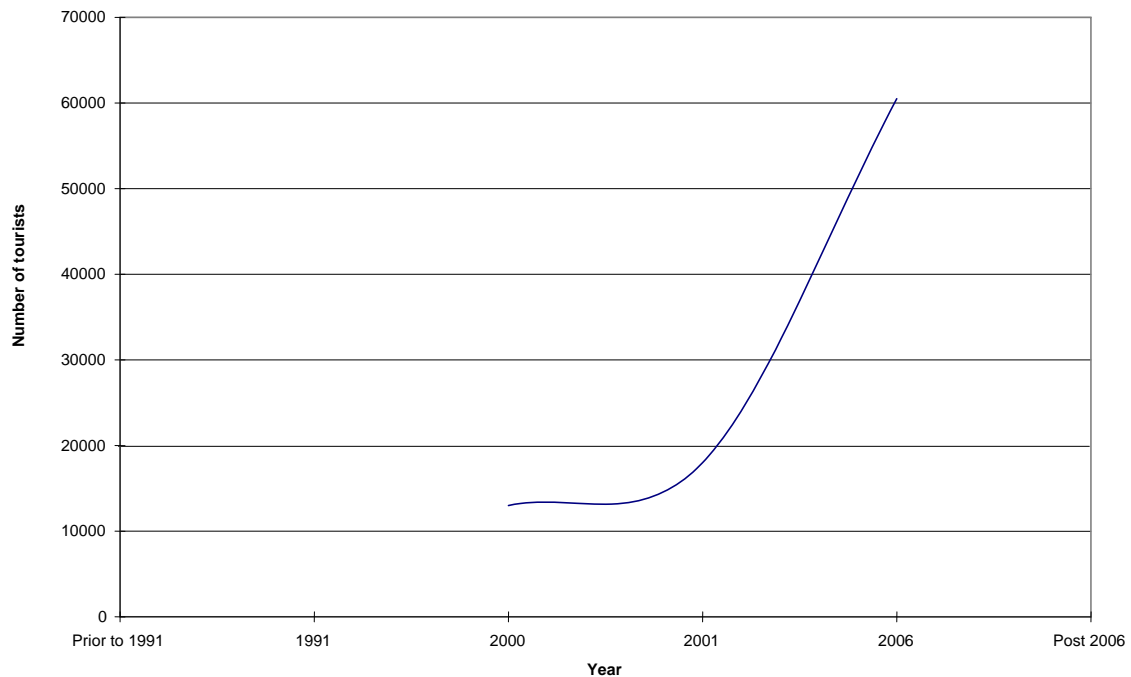


Figure 8. Tourism development in Sukau village.

Figure 8 indicates that Sukau is currently within the ‘development stage’ of Butler’s hypothetical evolution of a tourist area (compare with Figure 2). It appears that Sukau is still well within the ‘development stage’ as the village is continuing to become more widely marketed as a tourist destination, and its popularity as a destination is still increasing. The length of time for which Sukau remains within this ‘development stage’ will be influenced by a number of factors. Care will need to be taken not to exceed the carrying capacity of the physical and social environments, while the continued protection of the environment and wildlife of the Lower Kinabatangan will be essential for continued tourism development as it is the main tourist attraction.

5.10 Motivation of lodge operations

Three of the lodges surveyed stated that economic profit is the most important reason for being involved with ecotourism.

“Well in any business you do economic is number one” (L1 Management representative).

However L2 has a ‘triple-bottom line’ approach, where profit is not the only main goal.

“The main goal is to help the local community, and then have as less impact or disturbance to nature as much as possible and to get the local community involved in the lodge operation” (L2 Management representative).

When new projects are proposed, the owner of L2 enquires what the impacts will be to the surrounding environment, who is involved in the project, and whether the local people are taking full advantage of it. Lastly he will ask what the financial cost of the project is.

“The company, the senior management, they are moulded differently. It is all about environment, the local people” (L2 Management representative).

Yet it is still mentioned by the management representative of L2 that economic profit is very important as the lodge has to be able to run itself. The other three reasons for being involved in ecotourism (nature conservation concerns, interest in wildlife, and provide benefits to locals) varied from lodge to lodge as to where they were placed in the lodge incentives.

5.10.1 Ecotourism

Ecotourism has had to adapt to different environmental, socioeconomic and cultural circumstances throughout the world. Because of this, it is understandable why different people and institutions in diverse countries have arrived at different definitions of ecotourism. Ecotourism has also become a marketing tool widely used within the tourism industry, and many tourism ventures now label themselves as ‘ecotourism’ without meeting any additional environmental standards such as promoting conservation, having low visitor impact, and providing for beneficially active socio-economic involvement of local populations. The current form of tourism in Sukau is marketed as ‘ecotourism’ and the main activity on offer is wildlife viewing by boat. This occurs along the Lower Kinabatangan River, as well as the Menanggol tributary. However whether or not tourism in Sukau complies with the definitions of ecotourism, and is in fact ecotourism, is questionable.

Hector Ceballos-Lascurain (who coined the term ecotourism) revised and refined his definition in 1993 to:

“environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features – both past and present) that promotes conservation, has low visitor impact, and provides for beneficially active socio-economic involvement of local populations”.

The Malaysian National Ecotourism Plan (1997) uses this definition to define ecotourism in the Malaysian context.

Hence the essential components of ecotourism could be said to include: environmentally responsible travel; natural areas and nature; culture; promotes conservation; low visitor impact; local involvement and local benefits.

When the lodge representatives were asked how they would define ‘ecotourism’ a number of components were mentioned. L1 stated sustainability; L2 stated education, culture and local benefits; and L4 stated conservation, local benefits and education. The lodge representative from L3 was unaware as to what ecotourism was. These responses indicate that the lodge representatives have gaps in knowledge of ecotourism. Yet with such a complex term, most people would struggle to give an accurate definition of ecotourism. Along with their main incentives to be involved in tourism (refer 5.10) this gives the impression that the lodges in Sukau are not ‘eco lodges’ in the ‘true’ sense. Still they do portray some characteristics of ecotourism.

5.11 Lodge employment descriptions

Table 6. Number of lodge employees

Lodge	Total number of employees		Number of Sabahan employees		Number of Sabahan employees from Kinabatangan (locals)	
	Fulltime	Part-time	Fulltime	Part-time	Fulltime	Part-time
L1	6	2	6	2	5	2
L2	24	2	23	2	14	2
L3	25	4	23	4	23	4
L4	50	4	50	4	10	4
TOTAL	105	12	102	12	52	12

Table 6 shows that the four lodges surveyed employ a total of 105 fulltime and 12 part-time staff. All of the part-time staff employed by the lodges are locals. Of the 105 fulltime staff, 102 are Sabahans, and of that, 52 are locals. This indicates that roughly 50 per cent of all fulltime workers at the four lodges surveyed are local Orang Sungai. As previously mentioned, from my personal observations the two non-participating lodges are not too dissimilar to L2 and L3. The average of the fulltime local workers for L2 and L3 is 18 Orang Sungai. Giving this value to the other two lodges gives a total of 88 fulltime local employees in all six lodges in Sukau. These results also indicate that there are not many Filipino's or Indonesians working at the lodges in Sukau.²² However the local villagers have the impression that currently the lodges employ a lot of 'outside' workers *"...and we can count there are very few workers [who] are from Sukau itself"* (Home-stay operator). It is possible that the lodge representatives were not completely honest about their numbers of foreign workers. However, even if there are only 10 per cent foreigners employed by the lodges, the villagers might still view it as a 'majority' of employees from outside their community.

Figures from the 2000 Census showed that 83 per cent of the total employed population in the Kinabatangan District were non-Malaysian citizens. This means that only 17 per cent of those employed in the Kinabatangan District are Malaysian citizens. Hence the proportion of Malay citizens being employed by the lodge is comparatively high. One potential reason for this is that most of the people living in Sukau are local Malays; whilst most of the immigrants work (and live) on the big oil palm plantations outside of Sukau.

²² Sabah's locality and employment opportunities have attracted numerous immigrants to the State, many of whom are working illegally. Many Sabahans hold a certain hostility towards these immigrants as they are under the impression that they are out-competing the locals in the workforce. Indeed, these immigrants have a reputation for being more hard-working than Sabahans, and are often prepared to work for lower wages.

Of the four lodges surveyed, they all agreed with the statement that locals are employed by the lodge whenever possible. However they do mention that it can be difficult to get good local workers. One of the reasons stated for this is that most of the young people are not interested in staying in Sukau, and sometimes they just leave without giving notice. Still the managers know the locals and therefore already have an idea of who the good workers are and what skills they have.

“Yeah you want to train locals and you don’t want to waste money getting people from the outside who keep going back to town. And it benefits the whole family... and it benefits conservation” (L1 Management representative).

A local nature guide course was held in Sukau in August 2003 and five locals participated and passed the course (M. Noh, personal communication, August 13, 2007). Yet the guides employed by the lodges are not locals. The villagers assume that this is because the locals are not that experienced in guiding. However several of the lodges in Sukau are multi-destination companies, and therefore their guides are not stationed in one place.

“.... this is our philosophy. We don’t want these people to be stagnant in one place - especially [the] guides. We want them to [be] expose[d]. Sometimes our guide entertain their [guests], they sit together and just leisurely talk after the dinner... Normally they [the guests] will ask if there are other good places to visit and whatsoever. So yeah, that’s where the guide plays an important role to sell, and to share experience” (L4 Management representative).

Because of this the lodges do not focus on employing local guides. If in the future a local was employed by the company as a guide, then they also would have to guide in other destinations and not be ‘stagnant’ in Sukau.

Approximately an equal number of local males and females are employed by the four surveyed lodges. While the lodges encourage ‘multi-tasking’ within the more lower-skilled positions (and therefore by the majority of the local employees), some of the positions are best suited to male employees, while others are better suited to female employees. For example, all of the boatmen employed by the lodges are local males,

whereas the majority of the housekeeping positions are filled by local females. The fact that approximately half of the positions are typically male, and half female, means that there is roughly an equal opportunity for local males and females to be employed by the lodges.

5.12 Benefits of tourism for the locals of Sukau

The integrated conservation-ecotourism model (refer page 3) illustrates a relationship between tourism, development and conservation which is dependent on the local community gaining sufficient benefits from tourism. Direct benefits include employment within the tourism industry, while indirect benefits include improved infrastructure, education and awareness, environmental protection, and indirect employment through the sale of goods and services. These benefits of tourism for the local community of Sukau are discussed below.

5.12.1 Lodge employment

Locals are more commonly employed by the lodges for physical labour (lower-skilled positions) rather than managerial positions.

“The only criteria [is] are you willing to work long hours, and can you work hard. I mean, here it is mainly physical. We hire them for a little bit of brainwork but a lot of physical work” (L2 Management representative).

Multi-tasking and rotation is common amongst lodge employees. This is said to help prevent boredom and enhance skills. Only three locals are involved at a managerial level at the four lodges surveyed, and the highest earning local manager receives RM 1,000 per month. The mean starting wage in the four lodges for a lower-skilled position is RM 312 per month. This is what most of the local workers are earning. The more experienced lower-skilled workers can earn up to RM 600 per month. All of the boatmen employed by the lodges are locals. The position of boatman tends to be the lowest paid of all the workers at the lodges, and some of them only earn RM 200 per month. With the exception of the local manager who earns RM 1,000 per month, these wages are all well below the official poverty line (refer Table 7).

Nonetheless, all four lodges surveyed provide accommodation and meals for their staff. Other common benefits include transportation to and from Sandakan, earnings from drink sales (the profit from drink sales is divided amongst all staff at the end of the month), bonuses, and salary loans and medical benefits after one year of employment. In general, the more guests that the lodge has, the more benefits the employees receive, as the workers receive bonuses for each river cruise that leaves the lodge. Hence it is difficult to compare the different wages effectively.

Table 7. Comparison of wages/month

Job	Wage/month
Boat operator at a lodge in Sukau	RM 200
Mean starting wage at a lodge in Sukau	RM 312
Guaranteed wage for oil palm plantation worker ²³	RM 325
Net income from six hectares palm oil in Sukau ²⁴	RM 606 ²⁵
Minimum monthly wage as suggested by MTUC ²⁶	RM 650
Local manager at a lodge in Sukau	RM 800-1,000
Official poverty line ²⁷	RM 888
Income from leasing L1 in Sukau	RM 1,500

The villagers say that working at the lodges is very demanding and there is little financial benefit. The guaranteed wage of a worker on an oil palm plantation in Malaysia is similar to the mean starting wage at a lodge in Sukau, yet not many locals work as labourers on palm oil plantations as the “pay is poor and labour is hard” (Payne, 1989, p. 12). On the other hand, the income from a smallholder palm oil plantation appears to be much more lucrative. The IIED indicates that on average a six hectare smallholder palm oil plantation

²³ In 2001 a collective agreement was reached that stipulated that oil palm workers in Malaysia will receive a guaranteed monthly wage of RM325 (Wakker, 2004, p. 37).

²⁴ Six hectares is the standard area of land under native title (Payne, 1989), and hence the standard size of a locally-owned and operated smallholder palm oil plantation.

²⁵ The International Institute for Environment and Development (IIED) indicates that the estimated profit from a smallholder palm oil plantation in Malaysia in 2005 was US\$326/hectare/year. Their estimate of costs leads to a net income. Multiplying this by six hectares and using the February 2005 exchange rate of 1USD = 3.718 MYR gives a net income of RM7,272 per year. This equates to a profit of RM606 per month.

²⁶ The Malaysian Trades Union Congress (MTUC) says that the minimum monthly wage for a Sabahan worker, given the higher cost of living compared with Peninsular Malaysia, should be no less than RM650 (Migration News, 1997).

²⁷ The official poverty line monthly income is said to be RM888 in Sabah (Asia Times Online, 2007).

would have a net income of RM606 per month (Vermeulen & Goad, 2006, p. 16). Other sources (Grieg-Gran, 2008, p. 13; Wakker, 2004, p. 30) gave similar estimates. Still it is likely that a number of family members would be working on the family plantation. Yet this would not be fulltime work for all, and other additional income sources may still be pursued. Hence it is still evident to the villagers of Sukau that the profits from palm oil farming are significant. This does not do much to encourage the locals to get involved in tourism over oil palm, but instead a big incentive to convert their private forested land into oil palm plantations.

5.12.2 Other benefits from the lodges

The lodges in Sukau also provide a number of benefits for the wider community of Sukau. One of the lodge owners believes that education is the way to change people's mentality. For this reason he has invested in education in Sukau. This includes building a dormitory at the high school, offering scholarships which cover boarding and fees for one student each year, and giving cash prizes to top students. The lodge has also donated books to the local schools. A few years ago, one of the lodges invited a range of doctors to Sukau and hosted them. In return the doctors gave the villagers (from Sukau, and other villages further upriver) free medical checks. They have also organised a water tank project. The lodge staff went into Sukau and did a survey of who needed water tanks to harvest rainwater – *“because [otherwise] they collect the river water and boil it and drink it”* (L2 Management representative). Rotary International was approached to donate the water tanks, and these were distributed to the villagers by the lodge.

However those living in the village say that the assistance given by the lodges to the village of Sukau is minor in reality, and seems to be done for marketing purposes. Indeed, the lodges do mention their community contributions on their websites.

“Some of the lodges do help the community, however this generally tends to be highlighted for marketing purposes” (KOC project leader).

5.12.3 The villagers views of tourism benefits

Prior to the first lodge being built in Sukau in 1991, many of the villagers had never seen tourists before. They soon realised that tourism could provide them with opportunities – “...*there is a better income from tourism than from shop-keeping*” (Home-stay operator). All villagers interviewed reported that they thought tourism would be good for their village when it first started in Sukau. They were confident that it would bring improved economic benefits and job opportunities. The villagers thought that by interacting with the tourists they would benefit by being exposed to different cultures and have the opportunity to exchange opinions and ideas. They foresaw a brighter future for Sukau as tourism would provide opportunities for their children. It was believed that nature would also benefit through increased protection, and in general the standard of living in Sukau would increase. All of the villagers interviewed said that they would like to be involved in tourism in Sukau (however this is a likely response given the context of the interviews).

Now, the majority of those interviewed agreed that tourism is important for generating income in Sukau. It gives more economic opportunities to the villagers, and has diversified their livelihood options. They see tourism as a good way to increase their income, however some think that “*tourism itself is not sufficient as a source of income*” (Home-stay operator).

The question of ‘whether or not tourism benefits you sufficiently’ was only posed to the home-stay operators, as the majority of the other villagers who were interviewed were not currently involved in tourism in Sukau. The majority of the home-stay operators agreed that tourism benefits them sufficiently. Yet most of the home-stay operators do not rely on tourism as their sole source of income. It was mentioned that it also brings them other benefits, such as interaction with tourists and new skills. One of the home-stay operators (who is located in the centre of the village) relies entirely on the home-stay as her only source of income. She says that it is sufficient - “*just enough to ‘keep’ the family*”. It has also offered diversity to their lives – “*before the home-stay programme, what I did was only catch fish and prawns, and I sell some groceries at the store, that was all*”. The home-stay operators in particular have been exposed to tourists and receive a lot of information from them.

Those that disagreed that tourism benefits them sufficiently say that the income from the home-stay is too irregular and therefore it is not sufficient. *“If we had more guests then it would be profitable”*. One respondent mentioned that the prices of commodities have increased in Sukau and she believes that this is because of tourism.

The question of ‘whether or not tourism benefits your community sufficiently’ was posed to both the villagers and the home-stay operators. The majority of the respondents disagreed that tourism benefits their community sufficiently. They stressed the fact that not everyone is benefiting from tourism and that more involvement is needed.

“Actually tourism should be profitable for the villagers but this is only if it is done properly, but for now no” (Palm oil farmer).

The lodges in Sukau are owned by non-Bumiputra²⁸ Malaysians. Most tourists to Sukau are currently staying at these lodges. The lodges operate separately from the village. Therefore only a few of the locals are able to benefit from tourism.

“From the outside it looks like Sukau is benefiting from tourism, but it is not enough (Palm oil farmer). *“There is just one B&B, home-stays, and general workers in the lodges”* (Head of primary school).

However some of the interviewees believe that tourism does benefit the people of Sukau sufficiently. They say that the local community are able to learn a lot through tourism, and they have the opportunity to become involved if they choose to. RAE has established a community tourism fund as well as a community conservation fund which receive five per cent each from the gross sales. The community tourism fund is to be used for tourism development facilities in the village, while RAE, KOCP, and the wildlife wardens decide what the money for the conservation fund is to be used for by looking at the needs of the local people. For example, electric fencing was set-up around the cemetery to protect it from wildlife disturbance. RAE also employs local guides and uses local services such as the home-stay programme and boat services. One of the respondents mentioned that the local community also benefits through tourism as it conserves their natural environment.

²⁸ Bumiputra is a Malay term which refers to indigenous natives.

“If tourism remains in Sukau and continues in Sukau, our forest will be maintained and it won’t become over-developed. Therefore we would have our forest reserves and water reserves” (Marketer for palm oil company).

He further states that Sukau has a number of industries that has potential, for example tourism, agriculture, forestry, *“however tourism is the best industry for maintaining Sukau as it is”*.

When the village interviewees were asked to rank the stakeholders in terms of benefiting the most from tourism in Sukau, it resulted in Table 8.

Table 8. The frequency the stakeholders were assigned each rank in terms of benefiting the most from tourism in Sukau.

Stakeholder	Rank				
	1	2	3	4	5
Lodge owners	14	2			
Boat owners	1	3	4	2	3
Home-stay operators	1	3	1	4	5
Transport providers ²⁹		1	6	2	3
Landowners	1	3	1	3	1
Shop owners		4	1	4	
Tourism employees		2	4	1	2
Conservation workers	1			1	2
Fishermen			1	1	2

Most of the transport providers who base themselves at the Sukau junction are not locals from Sukau, and only two of the lodges surveyed lease land from local land owners. Most of the tourists stay at the lodges away from the village centre. The few tourists who do stay in the village, have their meals provided for them at their accommodation, and will only occasionally purchase ‘extras’ such as drinks and snacks from the shops. The interviewees were unable to explain why they selected transport providers, land owners, and shop owners as benefiting from tourism in Sukau. Therefore these stakeholders have not been

²⁹ Land transport from Sukau Junction to Sukau village.

graphed. However the frequency the remaining stakeholders were assigned each rank in terms of benefiting from tourism in Sukau are presented graphically below.

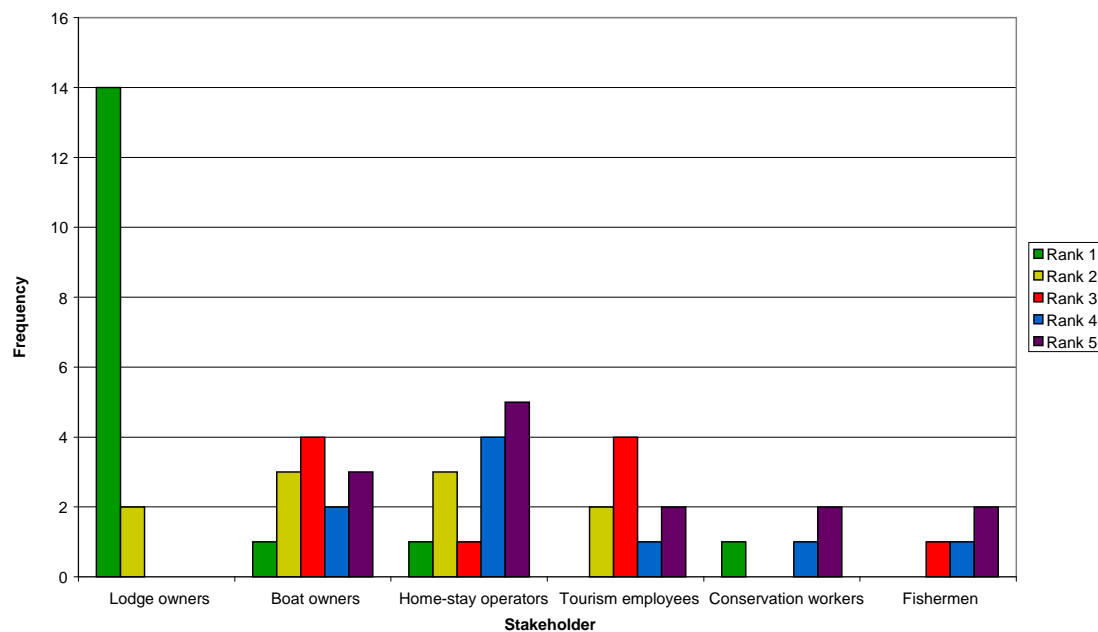


Figure 9. The frequency relevant stakeholders were assigned each rank in terms of benefiting the most from tourism in Sukau.

It is abundantly clear that the villagers view the lodge owners as benefiting the most from tourism in Sukau. The villagers say that lodge owners profit from tourism as “*there aren’t that many lodges in Sukau yet so the market hasn’t been flooded*” (Home-stay operator). Most of the tourists who come to Sukau stay at the lodges on packages which are all inclusive of accommodation, meals, transport and activities. Those villagers interviewed assume that the tourists go to the lodges because they are better promoted than the home-stay programme and B&B. Currently the lodges in Sukau don’t help to promote the home-stay programme. Recently a directive was initiated by the Ministry of Tourism and the District Office for the lodges to also utilise the boats of the local villagers and employ the locals as boatmen. One of the lodges has already made an agreement with the community to utilise four boats and boatmen from the village. This is valuable income for some of the locals, and the villagers hope that the lodges will use more locally owned boats in the future. Yet when the lodges utilise local boats they always use the same boatmen. One of the respondents (whose husband is a boatman) suggests that the lodges rotate the boatmen

that they employ so that everyone gets a fair opportunity. The lodges have their own boats and only use the village boats at times of shortage.

“The lodge owners have cited some reasons for not using the local boats – they have had some problems in the past, and there was one particular case when some youths were drunk when they were handling the boats. This is unfortunate as it does not reflect the villagers as a whole” (President of Youth Association).

Thus, the local boatmen aren't benefiting as much as they could from tourism as most of the tourists currently stay at the lodges. The boatmen mainly only profit when the home-stays utilise their services, however this is not frequent. They currently charge 70 Ringgit for a boat trip.

A number of home-stay operators comment that they don't need to look for alternative income – *“we have the home-stay and can just keep waiting for tourists to come”*. Yet the majority of those involved in the home-stay programme mention that the guests are too few and too irregular, and therefore they can't rely on it for their income.

The lodges in Sukau have created job opportunities for the locals. Most of the local employees receive about RM 300 per month.

Although conservation workers are not directly employed via tourism, their product (conservation) is endorsed by the tourism potential of the area. A total of 35 locals are employed as conservation workers by KOCP, and another eight locals are employed by RAE. Another conservation-focused NGO, WWF, also has an office and employees in Sukau. However currently no locals are employed in full-time positions by WWF in Sukau. The reason for this is that WWF job vacancies are advertised nationally. However a couple of Orang Sungai are employed as Daily Paid Assistants (DPAs) and carry out contract work primarily as field assistants.

Even though the lodges use locally sourced prawns, the villagers say that the fishermen do not make much money in Sukau. The villagers mentioned that resources are becoming scarcer now due to the pollution in the river caused by logging and oil palm activities

upstream. However there is also concern that the increase in tourist boats has also contributed to this problem.

5.12.3.1 Tourism employment in Sukau

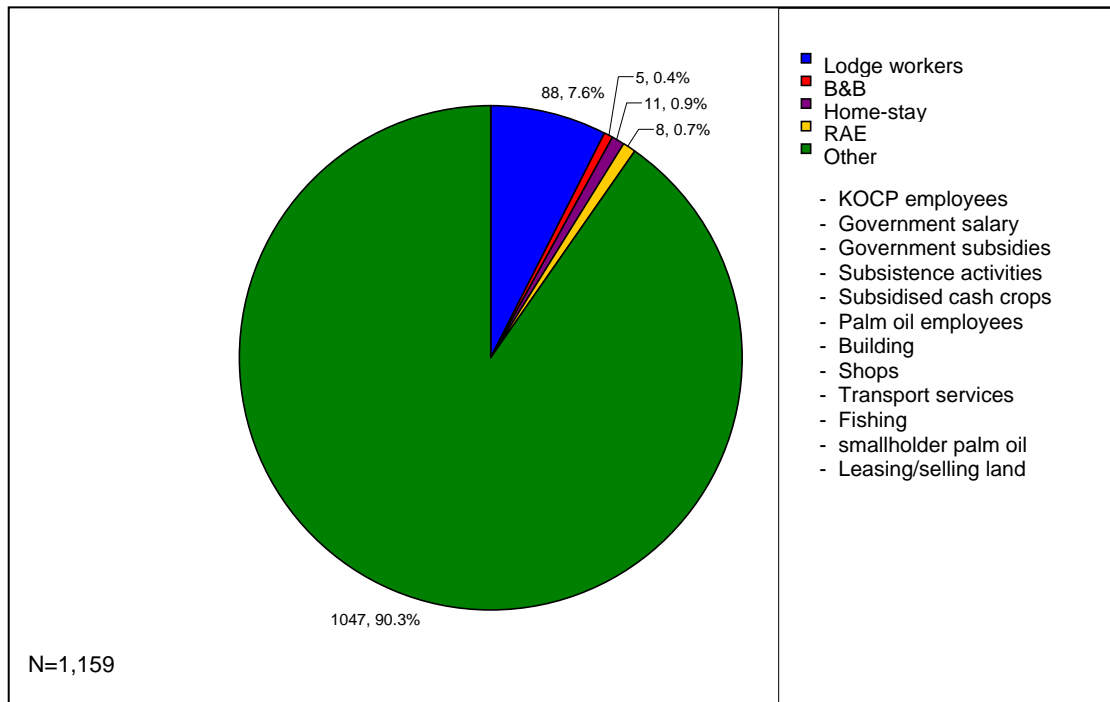


Figure 10. The percentage of the total population of Sukau who work in tourism, compared with other livelihood options for the villagers.

Figure 10 shows that ten per cent of the total population was directly employed by tourism in 2006. The majority of those employed by tourism are workers in a lodge.

There are 243 homes in Sukau. Assuming that two people from every home are available to work, the working population would number 486. When this hypothetical working population is used instead of the total population of Sukau, tourism as an income source appears more significant. In reality many of these homes may not have two people working, which would further increase the significance of tourism as an income source in Sukau.

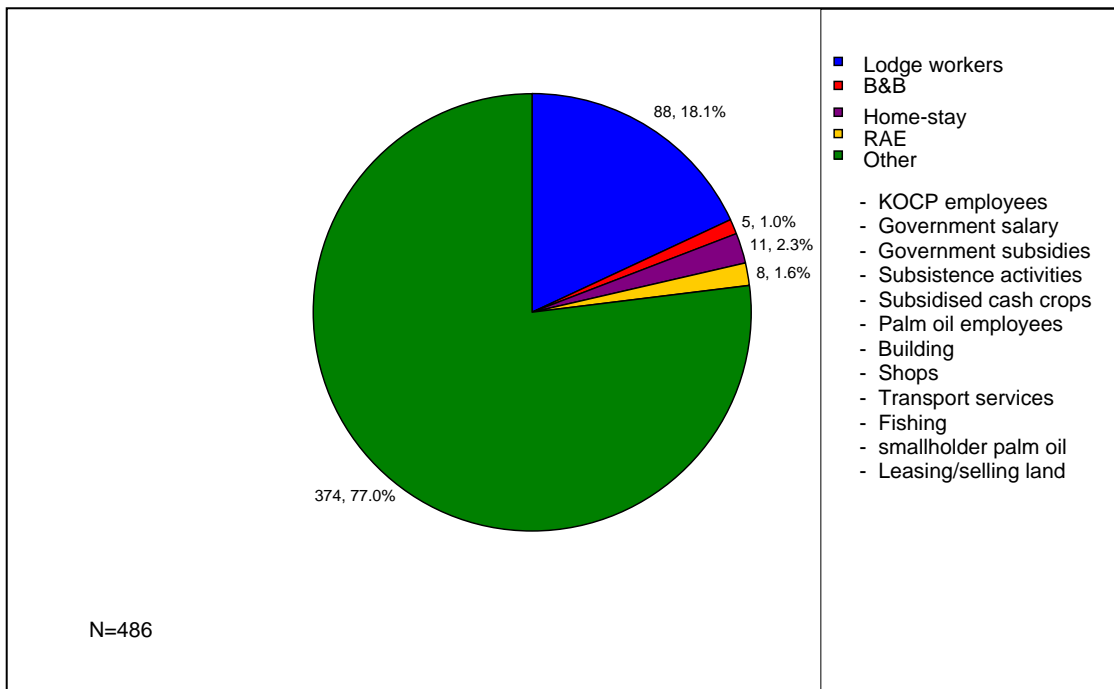


Figure 11. The percentage of a hypothetical working population of Sukau who work in tourism, compared with other livelihood options for the villagers.

Figure 11 shows that of an estimated workforce, 23 per cent are directly employed by tourism. Lodge employees make up 18 per cent of this. Other sources of income are relied upon by the remaining 77 per cent of the hypothetical working population.

5.13 Home-stay issues

While the home-stay operators now say that “*it is easy to run a home-stay*”, they did encounter some problems when first starting their home-stay businesses. The toilets were often not up to standard and had to be fixed. The locals use river water for washing, however as this would not be acceptable for tourists, they needed rainwater collection tanks. These were supplied by WWF to those home-stays that were first registered immediately after the WWF training. Some of the more recent homes to join the home-stay programme were also donated water tanks by one of the tourist lodges in partnership with Rotary International. However my personal experience suggests that these water tanks are not actively utilised by the home-stay operators and that the tourists are expected to use the river water for bathing. Language barriers were a major issue. The home-stay operators

were taught some very basic English which helped them to communicate with some tourists. However they still found it especially difficult to communicate with tourists from Japan for example. Hand signals and basic words such as ‘yes’ and ‘no’ were relied upon. Unfortunately interactions between the family and the guests are still kept to a minimum. The family does not eat with the guests, and verbal interaction is limited. This could be due to cultural differences and is surely accentuated by the language barrier.³⁰

The five original home-stay operators that registered in 2002 attended training courses that were run by WWF. All those that attended were very positive about the courses, and believe that the content was beneficial for running a home-stay business. They were taught things such as bed-making, food preparation and improved sanitation. They were also given mattresses, water tanks, and helped with improving the sanitation levels of the home-stay. However further assistance has not been offered since then, and some of those who attended those training courses still have not received their certificates. Those home-stay operators who joined after this initial recruitment have not received any training or assistance; however they are very interested in receiving this. Currently they have to do everything independently. RAE uses the services of the home-stays to accommodate their guests, but have not offered any training or assistance.

The main obstacle that the home-stay operators currently face in the management of their home-stay business is that the guests are too irregular, and they can’t rely on it for their income. Some of the home-stay operators mentioned that they think the current home-stay rates are too low. All of the home-stay operators said that they would like to receive more guests. As there are not many ‘independent travellers’ to Sukau, some of the home-stay operators say that they are reliant on RAE.

“Currently we get our home-stay guests from RAE who will get the guests and pass them to the home-stay owners.”

However RAE does not receive many customers, therefore the home-stay programme can not only rely on this. More tourists stay at the lodges rather than the home-stays, and one

³⁰ However in saying that, the home-stay experience of staying at Miso Walai in Batu Putih is markedly different with full interaction between the guest and the home-stay family, including cooking, eating, and communicating together.

reason for this is that the tourists are not aware of the home-stay programme (Travellers, personal communication, July 2007). Some of the home-stay operators believe that there is an unfair distribution of guests. Those located away from the centre of the town receive fewer guests than those who are in the centre of the town. This is probably because when tourists first arrive in Sukau they get dropped off in the town centre and then look for a home-stay from there. Most of the home-stays currently do not have signs to inform tourists of their whereabouts.

Six home-stay operators in Sukau have ceased to receive guests; yet they all say that they plan to receive guests again in the future. A variety of reasons for their current status were given. In 2004 one home-stay operator became unavailable as they started a family and moved house. They were originally registered as home-stay operators under the parent's home. When they moved the registration remained with the home of the parents, and they are now not registered to receive guests in their new home. Another home-stay operator stopped receiving guests in 2005 due to ill-health, while another operator stopped receiving guests in 2006 as his wife became pregnant. One home-stay operator is currently unavailable for receiving guests (as of 2006) as he is constructing a new home. Another one stopped receiving in 2006 as he is currently renovating the house and waiting to complete the repairs to the kitchen. One of the home-stay operators is currently leasing part of the house to a scientific researcher, and therefore is unable to accept home-stay guests.

5.14 Education and training

5.14.1 Education levels of lodge employees

All of the local employees in the lodges have at least primary school education. About half have been to high school, yet very few completed high school. None of the local employees holds a university degree. This level of education of the local employees corresponds with the types of positions that most of them hold at the lodges, i.e. they are general workers, not managers. Therefore higher education is not required for this work.

5.14.2 Education levels of village interviewees

Over half of those villagers interviewed (and their partners), have attended high school. Yet only two respondents completed high school, one of which later graduated with a Diploma in Education. Only one interviewee had received no formal education (refer Appendix 12).

5.14.3 Training of lodge employees

The lodge representatives stated that training fees for staff to further their education/training would be funded by the lodge. However this training is usually limited to the top-end staff (of which few are local), and it is doubtful that this would be offered to the lower-skilled workers.

“Because we are quite busy so, if we talk about development for every individual, it is quite difficult to slot in” (L4 Management representative).

One of the lodges is said to encourage self-development among its employees, and further training and promotions are open to any of the lodge workers who show particular talent. After additional training they will then be considered for promotion and a salary increase. However the manager admits that this self-development amongst the employees has not yet been emphasised much, as he is still *“going through the process himself”*. The managers (which includes one local) go to Kota Kinabalu every two weeks for meetings and motivational talks from the lodge owner. These teachings are then meant to be shared with the other lodge staff, i.e. the majority of the locals. However this is currently proving difficult due to time constraints and differing levels of understanding. Hence the managers are receiving good training, but this is not being passed onto the lower-skilled local workers.

All of the four lodges surveyed say that they offer job training for their employees.

“If there is an initiative by the Ministry of Tourism or the District Office, sometimes they have trainings for upgrade of their skills, so we send them off” (L1 Management representative).

However it seems that this is not a major priority for the lodges and depends on how busy they are. In reality most of the lodges are always busy; therefore it is questionable as to how much job training actually occurs.

Most of the training offered by the lodges is ‘training on the job’. This includes English language training. The majority of the staff can understand and speak some English. They learn this at school and some of the staff had also learnt some English during previous employment. This gets further developed while working at the lodge. One of the lodges (L2) sometimes has volunteers coming from outside of Malaysia. Amongst these they once had someone who taught English to the staff - *“I would like to have this on more of a consistent basis”*. Most of the training offered to the local workers is ‘top-down’.

The lodge representatives say that there are a number of issues in regard to the training of locals. The lodges have a very high turnover of staff. Some of the locals (and the younger ones in particular) want to leave Sukau and work elsewhere. However the trend is for them to return after a few years as living is cheaper and easier in Sukau. Still this means that it is difficult for the lodges to retain good-working young local staff. Another issue is that the villagers do not want to leave the village to attend training courses, as most of them have children to care for, and *“here family comes first”* (L1 Management representative). Therefore the locals would be more open to training if the personnel would come to Sukau to teach them.

The lodge representatives mentioned that the locals tend to have a different mentality from the western way of thinking.

“To say that they are lazy is wrong - it is a different way. I think [that a] long time ago everything came easily and freely to them. You get your fishes, you get your vegetables, you get your meat, all from here. And when you want them - you go and get it, if you don’t want it - then relax at home. So that is not a lazy mentality actually, that’s if you ask me, it’s a real good balance with nature. They spend their 24 hours wisely. But of course you can’t do that today, because things have changed. But the mentality is still there. When you have a task for them to do, they will complete it – 100 per cent they will do it. And then when the task is finished,

hmmm, they will wait for another task. So, that's why I say we push them" (L2 Management representative).

The lodges would like the local villagers to adapt their working style to fit in with the needs of the lodge and the tourists.

"You have to train them on how to adapt with being involved in tourism. They need to become more confident and speak to people" (L2 Management representative).

However all of the lodges agree that it is important to train the locals. Giving them experience and

"... opportunity to grow is a good step for them to start their own business. I think one day they will open their little B&Bs. And it will be good for the village... these people have the land here. They are the 'guardians of the forest' here. And if they are not benefiting then it's going to be a big problem for the sanctuary" (L1 Management representative).

5.14.4 Local villagers view on tourism training

Many of the villagers have improved their English language skills since the arrival of tourism in Sukau. Still the extent to which this has occurred varies greatly. Those villagers who are directly involved in tourism (i.e. lodge workers, RAE employees) have improved their English language skills considerably as they are speaking it every day. Unfortunately the home-stay operators have only learnt very limited English. Some of the reasons given by the home-stay operators for their limited improvements in English are that they haven't received language training, and that most of the tourists stay at the lodges so they don't have the opportunity to use the language often enough. The villagers are proud of their improved English language skills, and they would like to improve these skills further. The local nature guide course gave the villagers an opportunity to learn guiding skills and gain a local qualification. Other locals have also gained guiding and wildlife management skills through work experience. KOCP also offers opportunity for development through its seminars and events such as 'World Environment Day' Amongst the other skills which

have been improved since the arrival of tourism in Sukau which are mentioned by the interviewees are interaction skills, wildlife spotting skills, home-stay management skills, and hygiene and sanitation.

When the village interviewees were asked to rank the stakeholders in terms of benefiting the most from tourism training in Sukau, it resulted in Table 9.

Table 9. The frequency the stakeholders were assigned each rank in terms of benefiting the most from tourism training in Sukau.

Stakeholder	Rank				
	1	2	3	4	5
Home-stay operators	8	2	2	3	1
Conservation workers	5	1	7	2	0
Young people	4	1	4	0	3
Tourism employees	0	4	1	6	2
Boatmen	0	5	3	0	0
Transport providers ³¹	0	4	0	3	2
Boat owners	0	0	0	2	0
Other (general villagers)	0	0	0	1	9

A number of respondents chose boat operators and transport providers as those benefiting from training. Yet they were unable to expand on this, and it is unclear as to what training they have received. Because of this, those stakeholders (as well as ‘Other’) have not been graphed. However the frequency the remaining stakeholders were assigned each rank in terms of benefiting the most from tourism training in Sukau are presented graphically in Figure 12.

³¹ Land transport from Sukau Junction to Sukau village.

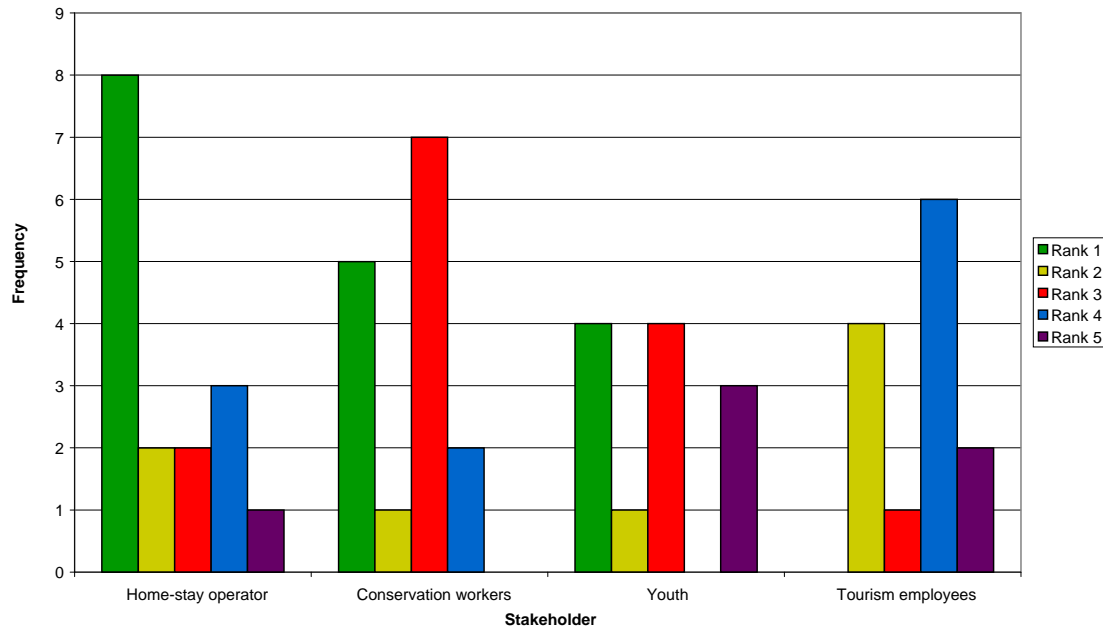


Figure 12. The frequency relevant stakeholders were assigned each rank in terms of benefiting the most from tourism training in Sukau.

As previously mentioned, five home-stay operators received formal home-stay management training from WWF in 2002. However it has been noticed by the villagers that the training within the home-stay group has now slowed down. There have not been further courses or training opportunities since 2002. As guest numbers are low and not equally distributed, some of the home-stay operators are now unable to put their training into practice and further develop themselves.

KOCP employees have been provided with extensive training, both locally and internationally. Some of the staff have had the opportunity to go to Europe for training (for approximately six-month periods), while other employees have had international exposure at conferences. They are exposed to and work alongside international researchers. Because of this their English is now very good.

The youths in Sukau are benefiting from training, as they are most often employed by the NGOs and the lodges, and they often get selected for training.

The workers in the lodges receive ‘training on the job’ and are able to interact with the tourists.

5.15 Environment

Essential components of ecotourism are natural areas and nature. The flagship species of the KWS (orang-utan, Bornean pygmy elephant, proboscis monkey, hornbills) are the focus of tourism in the area. The abundance of these species must be maintained if tourism is to continue in Sukau. Another essential component of ecotourism is that of promoting conservation. This should target both tourists and locals. One way of promoting conservation amongst locals is with environmental education.

5.15.1 Environmental education of lodge employees

Of the four lodges surveyed, three say that they are actively involved in educating its employees about the environment. Currently environmental education tends to occur during the everyday running of the lodge. One of the points stressed by all the lodges is that the boats should not go too close to the animals. However it is questionable as to where the motive for this comes from – concern for the wildlife or concern of disappointed guests when the animals get scared off?

Still, one of the lodges stresses that they are promoting ecotourism. Therefore employee environmental education occurs when they are exposed to tourists and their thoughts about nature. The lodge representative says that it needs to be instilled in them that if they cut down trees then this will affect the wildlife which will result in less tourists, meaning less work and less money. The villagers need to think of the long-term profits and not just think about ‘now’. But it is a long process to change their mentality.

“But I must say that sometimes people tend to stay what they [were] before. Yeah it’s in them, it’s in their blood. Yeah ok, they have tourists and whatsoever, and then after that they go back, and then they cut the trees... Yeah the mentality needs to be changed. They have to be a little patient. This one they want it straight away! And that’s the problem” (L2 Management representative).

Of the four lodges surveyed, only one actively provides incentives for employees to practice more environmentally sustainable methods. They do this by presenting certificates

and acknowledging staff that have been good in this aspect at major company gatherings. Therefore in general, the incentives offered by the lodges for employees to practice more environmentally sustainable methods are minor.

5.15.2 Lodges actions to minimise environmental impacts

Three of the lodges surveyed currently implement strategies to ensure minimal impact on the physical environment. The lodges solid waste gets taken to Sandakan where it is disposed of (although no-one seemed to know what happened to this waste in Sandakan), and only the food waste is disposed of in the river. One of the lodges also has separated rubbish bins to encourage recycling. However the effectiveness of this is uncertain, and whether or not recycling actually occurs is questionable. Most of the boats used by the lodges now have electric engines, and the used motor/engine oil is taken to Sandakan for recycling. All of the lodges are equipped with septic tanks for sewage treatment in accordance with government guidelines for tourist lodges in remote areas.

One of the lodges (L4) chooses not to offer night cruises. They state two reasons for this decision – safety of the guests *“if anything happens it will be a big buffet for Mr Crocodile”*, and disruption of sleep for the animals. During the night walks the lodge attempts to reduce disturbance to the animals by having two torches. The bright lamp is used for spotting the wildlife, while a dimmer lamp is used when the guests are looking at the animals sighted.

It appears that the level of involvement with habitat restoration/nature conservation activities by the lodges is minimal. Five of the lodges in the vicinity of Sukau village are participating in WWF’s pilot project for a Voluntary Conservation Levy (VCL). Yet this is a rather passive involvement as the lodges merely have a poster promoting the scheme and leave it up to the guests to approach them about it. Perhaps due to this, the success of the VCL has been marginal (M. Donysius, personal communication, July 31, 2007). One of the lodges has a tree-planting project which they integrate with their package tours. The guests visit an oxbow lake, plant a seedling and *“hopefully a tree will come up”* (L2 Management representative). However one of the lodges stated that they concentrate on providing services for the guests in their lodge, and *“trust that the Wildlife Department will look after the environment”* (L4 Management representative).

5.15.3 Villager's perceptions of environmental impacts

Most of the interviewees think that there have been no negative environmental impacts from tourism *“it is low-impact tourism in Sukau”* (Home-stay operator). One of the respondents stated that

“It [tourism] is good for nature – better than palm oil! It's good for the jungle, so then good for the world” (B&B manager).

Some villagers mentioned that tourism has prevented oil palm companies from cutting down more forest. This is true in the sense of the area protected by the Wildlife Sanctuary, which was endorsed by the tourism potential of the region. Tourism is also able to provide the local villagers with more livelihood options other than to develop smallholder palm oil farms. The villagers have also noted positive changes in terms of cleanliness in the village.

Still, some of the respondents mentioned slight changes to the environment such as land being cleared for lodges and other buildings. This has affected the visual outlook from the river, as the area is now more developed with buildings. However this change in outlook could be expected with any form of development and infrastructurally tourism development in Sukau is still low-scale. It was also noted by a number of interviewees that the quality of the river water has decreased significantly. Yet it is unlikely that this is caused by tourism. The more likely cause is palm oil plantations and deforestation upriver from Sukau.

The Menanggol River has been negatively affected by tourism. Because of the enhanced wildlife viewing opportunities, there is a real demand from the tourists to have the Menanggol on their itinerary. There are a lot of other tributaries along the Kinabatangan yet in most instances the bio-diverse rainforests flanking the tributaries have been replaced by a mono-culture: oil palm plantations (Photograph 8). Now almost all of the lodges include the Menanggol as their ‘introduction’ cruise on the first afternoon. Hence, the Menanggol River is overcrowded with tourist boats during the high season (refer Photograph 1). As well as detracting from the tourist's ‘wilderness experience’ it is thought that the overcrowding is having a negative impact on the wildlife. The proboscis monkeys

used to cross the river however they do not appear to do that now due to the presence of too many boats. The monkeys are “*now tamer – they just sit and watch*”, and there are less of them visible in the Menanggol now.

“Ten years ago there were a lot more animals” (Home-stay operator).

This is believed to be due to the increase in boats and tourists. The high numbers of tourist boats are also believed to be causing erosion on the banks of the Menanggol River. The villagers also mention that tourism activities affect fishing on the Menanggol during the high season.



Photograph 8. Where the rainforest ends, and the oil palm plantations begin.

Amongst the Sabah Tourism Master Plan’s recommendations was for a ‘tourist boat train’ to mitigate the overcrowded situation on the Menanggol tributary. This has clearly not been implemented. Yet the development and application of this recommendation could greatly reduce the above impacts of tourism on the Menanggol River.

Increased tourism activity is also believed to have caused more bank erosion along the Kinabatangan River. This is at its peak when elephants are spotted as the boats will go very close to the river bank. This not only causes bank erosion, but is also invasive for the wildlife and disrupts the elephants.

The villagers also mention that the wildlife around Sukau is now more accustomed to humans.

“For example the elephants come to the village and don’t seem to be so frightened by tourists when they are watching them” (Home-stay operator).

One respondent mentioned that when he was a child the proboscis monkeys were more elusive, however now they are more visible. Perhaps this could be due to the shrinking forested habitat. The wildlife is now squeezed into a smaller area and therefore can be seen more often on the periphery. Or maybe the wildlife is simply becoming habituated.

5.15.4 Villager’s environmental awareness

The environs of the Kinabatangan River are currently the biggest draw card for tourists to Sukau. Therefore if tourism is to be sustained in Sukau, it is essential that the environment is maintained and/or enhanced. For this to occur, the local community needs to be educated on the uniqueness of the environment and the benefits that it can provide them.

The majority of the interviewees agreed that the arrival of tourism has increased their environmental awareness.

“Yes tourism has increased our environmental awareness. With tourism we can’t cut down trees, we don’t kill animals, we don’t hunt animals, and we must keep the place clean and presentable” (Home-stay operator).

Before tourism the villagers would dispose of their rubbish in the river. However now they know that they must keep the village clean and they use rubbish bins. There is now more awareness and appreciation of the wildlife amongst the local villagers.

“WWF used to come and tell the locals not to cut down trees etc, and the locals weren’t happy about it. But now WWF have done courses etc here and have increased the local’s awareness. So now the locals are more understanding and happy about looking after the environment” (Palm oil farmer).

The villagers also say that they have benefited from environmental education provided by KOCP. For example KOCP provide environmental education at the schools, and they have

exhibitions for special days or events such as World Environment Day. There have been a number of international conservation researchers based in Sukau who have worked with KOCP. Some of the villagers have been exposed to these researchers and learnt from them.

5.15.5 Villager's incentive/motivation to protect the environment

The question of whether tourism has given them incentive to protect the environment was continually being misunderstood. Those villagers interviewed only interpreted 'incentive' (*insentif*) as receiving direct financial benefits for protecting the environment. The term 'motivation' (*motivasi*) should have been used instead. The wording of the question was altered for the final interviews. Even so, both wordings resulted in mixed responses. When the word 'incentive' was initially used in the question, one home-stay operator stated that there is "*no monetary incentive*". A similar response from another home-stay operator was "*they now ask us not to cut down trees but no financial incentive is offered*". Nevertheless there were also some more positive responses. Some of those interviewed realise that they have to maintain the environment in order for tourism to continue in Sukau. However they say that the government doesn't give them any direct incentives to look after the environment. Currently only the NGOs have provided (financial) incentives. Another respondent stated that tourism has given him an incentive to look after nature. When the question was altered and the word 'motivation' was used instead, the villagers generally gave a more positive response.

"Yes tourism has motivated me to look after the environment" (Head of village).

A reason given was that tourism has increased the economy in Sukau, and there are now more options to raise their income. This has given them the motivation to better themselves and protect the environment. However one respondent who already works in the conservation field believes that tourism has not given him any further motivation to conserve the environment as he was already motivated.

5.15.6 Village wildlife conflicts

It became apparent during the study that wildlife conflicts with the villagers is a very real problem in Sukau. All of those interviewed had a lot to say in response to this question.

The continued growth of palm oil plantations around Sukau has resulted in habitat loss for the wildlife. Because of this the animals are now living much closer to human settlements, which is causing conflicts between the wildlife and the villagers. One respondent mentioned that when he was young they never saw elephants, they only heard them.

“We didn’t have these problems 25 years ago” (Head of primary school).

The wildlife conflict which the interviewees mentioned most often was that between the elephants and the villagers. Elephant numbers have increased in the Sanctuary from 80 to 200 individuals in only ten years. This rate of reproduction exceeds the rate achieved in captivity (M. Ancranetz, personal communication, July, 2007). With rainforest clearance there are now more grassy areas which provide feeding places for the elephants. This, combined with their protection status, has resulted in a high density of elephants which are causing increasing conflicts with the villagers.

“Most of these conflicts are not caused by tourism. They are caused by the opening of big estates” (President of Youth Association).

The big plantations can afford to protect their farms from the elephants with electric fencing and/or gun fire as the potential economic losses for them from an elephant invasion are huge. However because the elephants are now also prevented from entering these areas to feed then they invade the crops of the villagers whom are unable to afford such protection measures as electric fencing. One villager interviewed had his entire coconut plantation destroyed by a herd of elephants in one evening just prior to the research period (refer Photograph 2). This is becoming increasingly common and this problem is not only specific to Sukau - other villages have similar problems. The villagers risk losing their entire livelihood from just one wildlife invasion.

“The orang kampung [village people] work very hard on their crops for years and then it can all be ruined in just one night by the elephants. Yeah... you work really hard; you can plant for three or four years, and then when the elephant is coming just one night....” (B&B manager).

It is not possible to translocate or cull the elephants as they are social herds - evidence from Africa suggests that this could make them more aggressive (M. Ancranetz, personal communication, July, 2007). The locals are not permitted to shoot the wildlife,

“If people take action against the elephants then they will be fined and jailed”
(Head of primary school).

However the villagers view this as ‘one sided protection’ as their livelihoods are not protected. Currently the villagers do not receive any form of compensation if their crops are affected.

The Wildlife Department do seem to be concerned by this conflict and if the villagers contact them then they will come and help to scare the elephants away.

“... But usually by then it is too late – and everything is gone, all gone” (Head of primary school).

It has been suggested by a number of interviewees that perhaps the Wildlife Department could employ qualified local people to help deal with the wildlife conflicts. Currently the Wildlife Department offices are situated in Bukit Garam, and there is nobody from the Wildlife Department permanently stationed in Sukau. Other wildlife conflicts in Sukau also exist. Monkeys, wild pigs, and orang-utans also invade crops; monkeys often tamper with the fish traps (bubu), and sometimes the elephants step on them and break them. However the local community now makes an effort to work together with the animals.

“But we also have to look after the wildlife now” (Palm oil farmer). *“We can’t blame the monkeys, can’t blame the elephants...”* (Freelance guide). *“The animals are fine but they need to be controlled”* (Head of village).

Another suggested solution is for the NGOs, government departments and tourism stakeholders to give the villagers financial assistance to protect their local crops with electric fencing. These groups tend to benefit from the increasing number of elephants being contained within a decreasing habitat as the tourists are better able to view them. However some of the villager’s livelihoods are now at risk. Even so, this solution for the

villagers would not help the wildlife. Some of the interviewees have suggested that fruit crops are planted in the middle of the forest as a source of food for the wildlife.

“So one idea is to locate an area where some food for the elephants like bananas can be planted so that the elephants will have food and not come to the village anymore” (Head of primary school).

However realistically it would be very difficult to sustain these fruit plantations for the wildlife as elephants tend to rip the entire tree out, not just ‘nibble’ on the fruit. The villagers believe they should be compensated when their livelihoods are affected by the wildlife.

“The Wildlife Department don’t compensate for the elephants destroying crops. The elephants eat the palm oil, eat the bananas, and everything” (Home-stay operator).

The respondents weren’t quite sure where this compensation should come from. There used to be more conflicts between the villagers and the wildlife before KOCP came and took some responsibility - they now work together with the villagers to try to find solutions.

5.16 Socio-cultural impacts of tourism

5.16.1 Interactions between tourists and local lodge employees

Interactions between tourists and locals are an important benefit of tourism. It facilitates a two-way process of learning that leads to a wider education about, and understanding of issues.

In order for effective interactions to occur between guests and locals, a common language is required. All of the four lodges surveyed state that they provide English language training. This tends to occur ‘on the job’. Three of the lodges encourage their employees to

interact and talk with the customers. However it was mentioned that this only applied to guides, managers, frontline staff, and guest relations officers.

All of the four lodges surveyed mentioned that their employees are shy at first and need to be encouraged to interact with guests. However they tend to quickly grow in confidence, and then do it on their own initiative. One of the lodges mentioned that there are always statements about the helpful, friendly staff in the guest's comments book.

5.16.2 Changes to local culture in Sukau

The majority of those villagers interviewed did not agree that there have been changes in the local culture since the arrival of tourism –

“There is a strong sense of tradition here” (Home-stay operator). *“There isn't just one culture in this village – the Orang Sungai are already mixed”* (Home-stay operator).

When tourists first started arriving in Sukau there was probably less awareness of the local culture amongst the tourists than there is now.

“There were tourists who walked around the village in skimpy clothes” (Palm oil farmer).

However now before the tourists come to Sukau they *“are already made aware of the tradition and culture and they don't come in bikinis and all that”* (Palm oil farmer). The villagers believe that travel guides such as Lonely Planet have helped with this change. Furthermore, when the tourists stay in the home-stays they are asked to observe the culture and respect it. One respondent mentioned that the villagers now have more pride in their culture, and want to show their culture to the tourists. They make an increased effort

“to preserve and maintain our way of life, as this is also an important product that we can offer the tourists. Tourism has revived the culture and developed activities, such as dance, music, traditional instruments” (Home-stay operator).

Because of the language barriers most of the villagers are not able to converse with the tourists. Perhaps for this reason, tourism has had less of an influence on the local culture.

5.16.3 Changes to traditional values in Sukau

The majority of the interviewees believe that the traditional values of the villagers have not changed since the arrival of tourism - *“we still have our own traditions”* (Home-stay operator). However some of the respondents believe that traditional values have changed somewhat since tourist lodges were developed in Sukau. One change is that the locals are no longer allowed to hunt sambar deer which was a traditional meat for festivities. This is because the wildlife is now protected within the Wildlife Sanctuary. And they said that the locals are also starting to lose their traditions in other ways. They no longer know traditional music, and no longer have traditional wedding ceremonies. However as traditional weddings are very costly this is likely to be more of an expense issue.

Handicraft making is no longer active in Sukau. Traditionally the materials would come from the forest, such as rattan and tree barks. However these materials are protected now and the trend is to use plastic instead. This ensures that the forest and natural resources are not disturbed. The lack of handicraft making in Sukau now is mainly because the people do not have the skills needed to produce these crafts, as the skills weren't passed onto them. Yet even those who have the knowledge to make the handicrafts tend to prefer to do some thing else instead.

5.16.4 Changes in village youth

Those villagers interviewed mention that there have been some slight changes in the behaviour of young people in Sukau since the arrival of tourism. Yet most of these changes are viewed as being positive.

“If [it were] not for tourism some of them [youth] would be loitering around”
(Home-stay operator).

Tourism has provided more work opportunities through work in the lodges or being employed by NGOs. The youths have the opportunity to interact with tourists and this has

resulted in an increased awareness. Those interviewed say that previously the young people were afraid of ‘outsiders’ and were not confident enough to interact with them. However now they have better English skills, and have greater confidence when dealing with tourists. The youths also tend to be more respectful now. More young people are leaving the village now to work elsewhere. Some of those villagers interviewed think that perhaps this is because they now have more awareness of the ‘outside’ and have better interaction and English-language skills. However those villagers interviewed also expect that these youth will return to live in Sukau at some stage. The majority of the interviewees say that the young people tend to still get on with their own activities, and aren’t very negatively affected by the presence of tourists. For example they can see the tourists drinking alcohol, yet the majority of the local youths still do not drink alcohol as they are Muslim. However one respondent insisted that some of the youths have been influenced by western ways through tourism and have become “*naughty and undisciplined*” (Palm oil farmer). For example he says that some of them drink and take drugs, they dye their hair different colours and they have piercings. Another respondent noted similar changes in the village youth. However he doesn’t believe that this is due to tourism – there has been more of an influence from TV. And as one respondent summed it up: “*It all depends on the person, what they choose*” (B&B manager).

5.17 Local procurement

The use of local goods and services is an important form of indirect benefit from tourism for local communities. The extent to which local goods and services are currently utilised within the tourism industry in Sukau, and the extent of flow-on benefits for the local community, is discussed below.

Table 10. Land ownership

Lodge	Lodge owner owns the land	Land purchase price	Land is rented from a local	Price of lease
L1	No	N/A	Yes	RM1,500/month ³²
L2	Yes	RM50,000 ³³ (Bann, 1996)	No	N/A
L3	Yes	?	No	N/A
L4	No	N/A	Yes	RM500 month (Bann, 1996)

Table 10 shows that two of the lodges surveyed own the land on which the lodge is situated (which they purchased off locals).

“Before the lodge was formed, the land was purchased from a local. So the whole chain of families were against selling the land off to an outsider. But the [lodge] owner assured the landlord that by building an eco-lodge, the entire family for the next few generations will be well taken care of by working here. So, he [the landlord] also agreed and informed the rest of the family members. However the family members still didn’t like the idea of selling off the land. It is something unheard of to sell off your heirloom. However these family members are now involved with the lodge. Of the local employees, 30 per cent are direct relatives of the ex-landowner. Also about 50 per cent of the boats that we hire are owned by direct relatives of the ex-landowner” (L2 Management representative).

Two of the lodges rent the land from a local. L1 pays a particularly high rent to the local land owner – RM1,500/month. The family who leases the land to this lodge previously ran it as a B&B.

“So we actually just took over from [the local]. Because they can’t manage it and it was run-down, you know. This place was rotting away. So when we took over this place they have existing building, you know, not just the land. If you lease the land probably its 500 Ringgit, but there was existing building” (L1 Management representative).

³² The existing buildings are included in this lease.

³³ Seven acres of land.

L1 is currently only operating with ten rooms, and have the cheapest rates of any of the lodges in Sukau. Clearly then, the rent paid to the landowners must be a significant proportion of the lodge's income.

Moreover, this rent is a major income for the local landowners. This family does appear to be one of the more 'better-off' in Sukau; they also have a smallholder oil palm plantation. One of the home-stay operators pointed out that some of the locals sold off their land to the lodges instead of renting. This has denied them of regular income from the land. He believes that land should be retained in native title and leased instead.

There was no clear agreement amongst the lodge representatives as to 'whether the lodges goods and materials are locally sourced whenever possible'. Two of the lodges sometimes utilise the local Thursday and Sunday markets (particularly when weekly food estimations are short), however most items are purchased from Sandakan. Reliability is a reason stated. Nevertheless, L2 seems to go out of their way to locally source their goods and materials. For example they employ locals to make the lodge's boats from local materials. These wooden boats only last for a maximum of one and a half years on the river before they need to be replaced, as they rot. However the lodge choose not to use fibreglass boats (which will last for many more years and maintenance is lower and cheaper) as this would cut-off income for the local people. Also the number of boats which the lodge owns is fixed, so if they need extra boats then they must rent these from the local people. This is another form of local employment. On the other hand, L4 stated that they have been through a lot of trial and error over the last 15 years, and that they have found that it is more reliable to source non-local food.

"We have to be very careful on local food because the types of tourists we have are old people [whose health is not so robust and therefore may be more susceptible to stomach upsets]" (L4 Management representative).

Wood products are an important locally sourced material. However the lodges have to be very careful about where the wood is harvested from. There are many agencies and organisations

“...which are active in controlling this area for people breaching the forest and all that... and I don’t want to get caught one day... because I will be in hot soup” (L2 Management representative).

One of the lodges always source their wood from private land. It is negotiable as to how much they pay for this wood, hence they need to ensure that they pay fair prices.

“This is the discipline that we have to enforce on ourselves” (L2 Management representative).

Some timber is also harvested from land on which the lodges are situated.

In terms of food offered by the lodges, locally caught prawns are very popular. However river fish is not used by all lodges. Two villagers mentioned that they intend to supplement their income from oil palm with fishing, while another respondent also plans to venture into fish and prawn farming. This *“can feed the tourism industry and won’t deplete the forest”* (Marketer for palm oil company).

Table 11. Number of boats used by the lodges

Lodge	Current no. of boats	Plan to purchase more boats (apart from replacements)?	No. of boats hired during the high season
L1	2	No	2-4
L2	6	No	2
L3	5	Yes	10
L4	5	No	5

Table 11 shows that boats are an important form of income for the locals. All of the lodges hire extra boats from the locals during the high season, and the boats are all locally made.

“The boats cost on average 2,300 Ringgit per piece. We have three boat builders for this since the beginning of the lodge, from three different families” (L2 Management representative).

All of the boatmen employed by the four lodges surveyed are locals. The lodges do own their own boats, but this is generally supplemented with local boats. As previously

mentioned, a directive was recently initiated for the lodges to also utilise the boats of the local villagers and employ the locals as boatmen.

When asked which goods and materials required by the lodge are not able to be sourced locally, all of the lodges surveyed mentioned chicken, fuel, and non-seasonal fruits and vegetables. The lodges require a lot of chickens for feeding their guests, and say that they would source it locally if it were available –

“It’s a good idea to start chicken farming here. But the locals don’t really rear animals that much. They are mainly hunters, and the animals are just for their own consumption” (L2 Management representative).

Yet when asked about their future livelihood options, one villager stated that it would be a good idea to raise chickens for local supply

“Because I see that chicken is much sought after for weddings and other feasts” (Palm oil farmer).

One of the lodges mentioned that although freshwater fish is available locally, they choose not to use it. They purchase saltwater fish from Sandakan instead as *“it [the freshwater fish] is not so good – lots of bones”* (L4 Management representative).

There also seems to be a shortage of locally grown fruit and vegetables.

“...because most of them used to have fruit gardens – they had big orchards, and now they have converted to palm oil” (L4 Management representative).

Two villagers who were interviewed plan to sell fruits and vegetables to the lodges in the future. However this is a difficult and risky business in Sukau due to crop invasions by wildlife, and the lack of compensation when this occurs.

5.18 Local consultation

Two important components of ecotourism are local involvement and local benefits. It is now considered essential to involve the local community at all stages of tourism development (Brandon & Wells, 1992; Mendoza, 2006). A participatory approach with community consultations enhances local benefits and influences positive attitudes towards tourism and conservation.

All of the lodges surveyed agreed that the local community were informed of, and had the opportunity to participate in, the lodges initial planning stages. However of the lodges that expanded on their response, they only mentioned consultations with the landowner. This indicates that they interpret community consultation as only consulting those that they *have* to consult. According to a number of those villagers interviewed, the lodge owners did only consult with the local who owned the area of land in which they were interested in. After this the lodge owners would go to the District Office and obtain a licence. Only then a notice would be sent to the village to notify them that permission had been granted for a lodge to be opened. There was no other consultation with the villagers other than that. The locals now think that more consultations should have occurred.

All of the four lodges surveyed agreed that all of their employees have opportunities to participate in the lodges operations and future plans. However it seems that this question was misunderstood. Of those which commented on their response, the assurance that the employees would retain their jobs after expansion was a clear issue. There was no clear consensus from the lodges surveyed as to what the main issues are in terms of local community and employee participation with the lodges planning, operations and plans. Their comments suggest that perhaps the question was also misunderstood.

5.19 Infrastructure

According to those villagers interviewed, the infrastructure in Sukau has changed since the development of tourism in the village. One of the main changes is the roads. Although the road from Sukau Junction to Sukau village is only 42 kilometres in length, it used to take up to three hours to travel this road during the rainy season. Recent maintenance work has improved the road and it now takes only half an hour to travel this distance during the dry

season. Still, many tourists are discouraged from visiting Sukau due to the uncomfortable overland trip that is required to access the village (other than the more pricey and logistically difficult boat option) (Travellers, personal communication, July 2007). This indicates that the standard of the road to Sukau could be limiting tourism development in the village.

The village also has two new jetties, and some of the villagers have water tanks for collecting rainwater. Sukau now has an electricity supply, and they have telephone lines and phone booths. The village also receives mobile phone coverage from various providers. There is an 'IT centre' in the village but it is locked and not in use. No-one is really sure as to why it is inactive.

It is difficult to say whether tourism was the catalyst for these infrastructural developments, or if they would have happened anyway with time. The villagers do believe that the existence of tourism backed up their requests for improved infrastructure.

“If there is no improvement in infrastructure then definitely tourists can’t get here. The jetty has been improved, as well as electricity, water, and roads. The lodges need these facilities too” (President of Youth Association). *“Probably the government realises that tourism in Sukau is progressing, so that is why there is an improvement in infrastructure”* (Home-stay operator).

5.20 The future

5.20.1 Improving tourism in Sukau

All villagers interviewed and/or their partner was born in Sukau. This would suggest that most of the people living in Sukau are Bumiputra. Therefore if assistance was given to livelihood development in Sukau then it is likely to benefit Bumiputra, which is one of the development goals of the Ninth Malaysian Plan. Improving tourism in Sukau is one way of achieving this.

The villagers believe that Sukau has high tourism potential. Malaysia is a peaceful country and is politically stable, compared with Indonesia, Philippines and Thailand. The villagers say that tourism should continue to develop in Sukau, and be sustainable in terms of numbers. The interviewees want tourism to improve in Sukau so that it brings them more benefits. The villagers say that in order for this to occur, a number of issues need attention.

Community consultation

The village interviewees mention that a community meeting to discuss what the villagers need and want is important. This information should then be taken to the JKK where government assistance can be sought.

Environmental protection

The interviewees realise that the tourists currently come to Sukau to view the wildlife. Therefore in order to improve tourism, they say that it is firstly important to maintain the current environment.

“The forest has got to be sustained to satisfy the tourists... and also the animal’s habitats should be maintained” (Marketer for palm oil company). *“We have to save nature first... Saving nature is a good move for the long-term”* (KOCPP employee).

One respondent suggested that both villagers and tourists can plant trees in areas of forest which had previously been logged.

Home-stays

The home-stay programme involves locals from Sukau. It is therefore obvious that an improvement in the home-stay programme is required if the locals of Sukau are to benefit more from tourism in the future.

“The home-stay programme is slightly crippled; it does not go that well. It is like an engine without oil, it moves forward very little” (Home-stay operator).

The villagers say that there is a need for greater organisation and supervision of the home-stay programme. Those involved in the programme need more training. The home-stay

operators mentioned that there are management issues within the home-stay programme, and currently the guests are not distributed equally. The home-stays in the centre of the village receive many more guests than those located away from the centre. The home-stay programmes in Batu Putih and Abai both have rotation systems in place to ensure that all home-stay operators have an equal opportunity to benefit from tourism. However in Sukau there is no rotation or roster system in place. A few of the home-stay participants believe that the home-stay coordinator role should be rotated amongst those involved in the home-stay programme. This would ensure that just one person will not always control and influence the programme. The villagers think that the home-stay programme requires more vigorous marketing and promotion in order to attract more guests.

The villagers say that Sukau should increase its number of home-stays and B&Bs. They expect that domestic tourism (and demand for more affordable forms of accommodation) will increase when the main road to Sukau is sealed.

B&Bs

An increasing number of villagers are looking to build B&Bs on their own land. However with the current level of enthusiasm, the village will need to be careful that they don't flood the market for B&B accommodation.

Community cooperative

Some of the villagers interviewed suggested that the community could do business together. They could combine their resources and start up a joint venture.

“Personally alone it is difficult to make efforts to improve tourism, but if it's a collective effort then yes it would be possible” (Head of village).

A number of village interviewees suggested fish or chicken farming.

“Then we wouldn't have to purchase the fish and chicken from outsiders, and we could utilise it in the dishes that we serve to tourists” (Home-stay operator).

In Semporna (a town located in the Tawau District south of Kinabatangan) there is also a home-stay programme and the villagers harvest seaweed. The home-stay operators buy this

seaweed from the co-op which is owned by the villagers, and use it in their meals which they sell to their guests. One interviewee suggested that Sukau could do something similar with freshwater prawns.

Partnerships between lodges and village

It was also mentioned by some of those interviewed that the local community should form partnerships with the lodges where both parties could benefit. The community in Abai have established a good partnership with the lodge in their village. Instead of relying on overnight stays, the community have developed a number of activities such as tree planting, tea breaks, cultural shows, and village walks for the lodge guests to partake in. These activities are promoted by the lodge and bring greater wide-spread benefits for the local community.

“We want an opportunity to collaborate with the lodge - we need employment opportunities for the villagers. We don’t want the lodge to use people from the outside to work for them; we want them to use the villagers instead” (President of Sukau Youth Association).

The villagers of Sukau say that this could be possible in a number of ways. One idea is to rent potted plants to the lodges which can be changed on a regular basis. The villagers mentioned that they could also cook traditional food for the tourists at the lodges. Another idea is to take the tourists on fishing trips and teach them how to catch prawns.

Product diversification

Currently the only tourist attraction in Sukau is the wildlife, however respondents believe that there is potential to expand on this.

“We need new tourism related projects” (Palm oil farmer).

This palm oil farmer believes that there is good potential to take tourists on tours of the palm oil plantations as a form of education and awareness. A greater number of villagers think that handicraft making should be developed in Sukau. There is already a demand from tourists to buy locally made handicrafts. Yet nobody in Sukau is currently making

them. Handicraft making could be of dual benefit – they can be sold to the tourists, and it also will help to revive local culture.

Financial assistance

This was the most consistent limitation to tourism involvement mentioned by the villagers. The locals say that they already have the land but no financial capital to develop. It was suggested by some of the villagers that financial assistance could be offered from the government.

Tourism training

The majority of those villagers interviewed believe that training would help enhance their involvement in tourism.

“The Government should provide courses that will help the locals to develop and manage tourism” (Home-stay operator).

It would be preferable if the courses were locally run; as if they occur in the cities then it is more expensive and difficult for the villagers to attend. The villagers say that language is currently a barrier to their involvement in tourism. Most of the villagers suggest courses in English language. Yet a freelance guide who was interviewed mentioned that there is now a demand for multi-lingual guides due to an increase in tourists from China and Taiwan. Therefore perhaps Chinese should also be taught. The interviewees say that tourism management courses are important. One villager is currently building a B&B and plans to open it in the near future. He would like to receive training on marketing and promotion, as well as business management. Access to information on how to obtain loans, finance the business, and how to market their business would be beneficial for the villagers. Further guiding courses for local freelance guides were also mentioned. The villagers think that opportunities to learn how to build infrastructure would also be beneficial. Courses on handicraft making and nature guiding were also suggested.

Marketing

The villagers realise that they need to look after the tourists as news of Sukau will travel by ‘word of mouth’. They say that the home-stay operators in particular need to learn how to

properly receive guests, and the villagers should be nice, polite and interact with the tourists more.

A number of interviewees mentioned that a committee should be established to organise tourism activities in Sukau, and also collectively market and promote Sukau as a destination. It would be beneficial if all tourism activities were operated and managed under ‘one roof’. The villagers think that Sukau should be marketed in a number of ways. This could include brochures at tourist information centres, the internet, and media coverage. Sukau is currently marketed and promoted by the lodges and other major tourism stakeholders as ‘a gift to the world’. One respondent believes that the local community should capitalise on this reputation and also use it for their own promotion. *“There is already a lot of marketing for the lodges but not for Sukau village”* (Home-stay operator).

Infrastructure

Those villagers interviewed say that infrastructure still needs to be improved in Sukau. The main road to the village is currently being sealed, and the villagers believe this will result in increased domestic tourism. The interviewees also stated that the village still needs a clean water supply. *“Everyone should get clean water, it should be for everyone”* (Palm oil farmer). The villagers would like a new medical clinic as the previous one was destroyed in a fire. The village now only has a dispensary and the closest hospital is located in Bukit Garam. This is clearly not adequate in an emergency. The interviewees (the home-stay operators in particular) mentioned that they would like a tourist information centre for the village. This can provide information for the tourists when they first arrive in Sukau. A map of the village with the locations of all the home-stays could potentially distribute the home-stay guests more fairly. It may also serve as a source of advertising for the local tourism providers. In order for tourism to be improved in Sukau the villagers say that there needs to be better access to the internet. Currently a number of entrepreneurs are unable to market themselves properly as they do not have access to the internet. Currently their services are advertised only via ‘word of mouth’. A cultural centre and a centre for arts and crafts in Sukau were also suggested by those interviewed.

Another recommendation is for an education centre for wildlife. This could cater for both locals and tourists. The centre could include an education programme and informative exhibits. It should be open to everybody to gain information.

The Ninth Malaysia Plan 2006-2010 states that tourism facilities such as information centres and public amenities will be provided and upgraded in tourist areas throughout Malaysia (Economic Planning Unit, 2006, p. 201). The Plan also mentions that domestic tourism will be further developed and will remain a priority (Economic Planning Unit, 2006, p. 203). According to the Kinabatangan Corridor of Life programme, WWF are not planning to become actively involved in tourism in Sukau in the near future. Yet WWF are involved in developing the Kinabatangan Tourism Master Plan. This is still to be released but it will possibly include a number of recommendations for improving tourism in the district. It will be interesting to see how these recommendations correspond with those made by the villagers of Sukau.

5.20.1.1 Future livelihood options

Table 12. Matrix displaying the future livelihood plans of those interviewed (●).

Future plans	Respondent number																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
A	●			●		●			●	●		●	●		●		●		
B	●					●						●							
C		●		●		●	●					●							
D			●																
E					●														
F							●												
G								●											
H								●	●			●				●			
I											●							●	
J															●				●
K																	●		
L									●	●									

(A = Palm oil; B = leasing houses; C = B&B; D = Jungle camp; E = eco-lodge; F = fish and prawn farming; G = selling cakes at the market; H = Home-stay; I = Handicrafts; J = selling fruits and vegetables; K = chicken farming; L = fishing)

Table 12 shows that half of the respondents plan to become involved (or remain involved) in oil palm farming in the future. This is easily the most popular option for livelihood in Sukau. The income from oil palm is viewed as being rather lucrative, hence the big attraction for the locals to become involved.

“For six hectares you can get about 4 – 5,000 Ringgit in a month³⁴. Because for one tonne you get 500 Ringgit, so sometimes you can get up to about twenty tonnes. We get about 15-20 tonnes of oil palm in a month” (Palm oil farmer).

Yet the villagers should be aware of a number of important issues in relation to developing smallholder palm oil plantations:

1. Elephants and other wildlife are already problematic in terms of invading crops and palm oil plantations in and around Sukau. The economic losses from wildlife invasions of smallholder farms are potentially very high. Few smallholder farms will be able to protect their crops with electric fences and/or gun fire. To do so would incur additional costs to the developer.
2. As previously mentioned, areas of the Kinabatangan floodplain get flooded every year. This indicates that perhaps this land will be unsuitable for oil palm development.
3. The average palm oil development costs in Malaysia amount to RM 6,000 per hectare (Hardter, Chow, & Hock, 1997, p. 98). Banks do not tend to lend money to assist smallholders due to lack of creditworthiness, limited deal sizes and high risk premiums (IIED et al. 2004 cited in Vermeulen & Goad, 2006). A number of companies are now offering loans to support smallholders, yet they come with high interest rates (Vermeulen & Goad, 2006). The villagers say that they should avoid these as *“it may be a risky business”* (Marketer for palm oil company).
4. There is a considerable ‘lag’ between the high initial financial investment and when the plantation becomes profitable. With a reasonably productive plantation and assuming average prices, return on the initial investment is usually achieved after six or seven years after planting (Hardter et al., 1997). Peak production occurs when the palms are seven to fourteen years old (Bann, 1996).

³⁴ Figures quoted here refer to Gross income.

5. A smallholder plantation requires the labour input of more than one family member. Therefore the net profit should not be viewed as being only one person's monthly income.
6. Palm oil prices doubled over the period 2005-2007 (Grieg-Gran, 2008), and reached their peak in March 2008 at RM 4,486 per tonne (Nadzmi, 2008). Therefore during the research period, palm oil farmers were able to get high returns on their Fresh Fruit Bunches (FFB). However due to the current financial crisis (2008-9) and the falling price of crude palm oil, prices have plummeted to approximately RM 1,500 per tonne (Nadzmi, 2008). Oil palm millers are now purchasing less FFB as the market price is so low. They focus on keeping their important clients (the big plantations) and refuse to buy from smallholders. Smallholder farmers in the Kinabatangan have now been forced to let their oil palm fruits rot (Nadzmi, 2008). This highlights the vulnerability of smallholder farmers.

An increase in palm oil plantations will further fragment the forested wildlife habitats, and it is likely that this will result in increased wildlife conflicts. As previously mentioned, WWF are currently negotiating with landowners to set-aside some of their land to serve as wildlife corridors. WWF are also hoping that policy will be introduced which will restrict activities on private-land with high conservation value. This will mean that landowners may not be permitted to clear forested areas for palm oil conversion (J. Majail, personal communication, August, 2007).

Yet those who plan to be involved in oil palm also plan to combine this livelihood option with other options – namely direct involvement in tourism. One respondent is planning a jungle camp, one hopes to create a true 'eco-lodge', four respondents mentioned that they would like to become re-involved with the home-stay programme, and five respondents stated that they plan to operate a B&B in the future. The villagers tend to view operating a B&B as a good business for those with family commitments. One B&B is currently under construction.

As previously mentioned, the current financial crisis (2008-9) has also had an impact on the global tourism industry. It is expected that more travellers will choose to cut-costs by holidaying in their home countries (World Travel and Tourism Council, 2009). Tourism in

Sukau could benefit from this as Malaysians with disposable income look for domestic holiday destinations. Additionally as Sabah is centrally located between Europe, the Americas, and Australasia (from where the majority of visitors to Sukau come), Sukau as an international tourism destination may not suffer too badly. The financial crisis may also increase the demand for village accommodation (home-stays and B&Bs) as they are more affordable options.

One of the more active home-stay operators plans to continue with the home-stay programme and use the income generated from this to invest into palm oil farming. She and her children will supplement this money with a loan from the Bank of Agriculture. She will then use the income generated from the oil palm business to open up a B&B.

Three respondents who plan to become/remain involved in oil palm, also plan to lease houses in the future. One of these villagers is already renting houses to people, and he plans to build more rental houses in Sukau. This rental accommodation is intended for teachers and also foreigners.

Two respondents only mentioned handicrafts as their future livelihood plan. They could make souvenirs to be sold to the tourists, and they realise that there is also a local demand for handcrafted prawn traps.

Two respondents intend to supplement their income from oil palm with fishing, while another respondent plans to venture into fish and prawn farming. This *“can feed the tourism industry and won’t deplete the forest”* (Marketer for palm oil company).

One active home-stay operator currently sells home-made cakes at the village markets and she plans to continue this. As mentioned previously, one respondent thinks that it would be a good idea to raise chickens. Two respondents plan to sell fruits and vegetables locally, to Sandakan, and to the lodges.

One of the respondents plans to move out of Sukau in the future and search for work elsewhere.

5.21 Summary

The results from the field research in Sukau village have been presented and discussed in this chapter. These research results indicate that tourism has had a number of impacts on the village of Sukau. These impacts include employment opportunities, increased environmental awareness, the provision of environmental education, and improved infrastructure. Still the villagers believe that not everyone in the village is benefiting from tourism and more local involvement is needed. This, as well as other issues, will be further discussed in the next, and final, chapter of this thesis.

6 Conclusions and Recommendations

This chapter summarises the current research by re-visiting the research objectives and addressing the main findings. This will be followed by a discussion of some practical, as well as research, implications of this study.

6.1 Research findings

The study results presented below are organised according to the study objectives. As a number of other significant findings emerged through this research, these are also discussed below.

6.1.1 Objective One

Investigate what the community was like prior to tourist lodge development in Sukau

Prior to 1991, when the first lodge was developed in Sukau, tourism in Sukau was limited to day-trips organised by external tour operators and entrepreneurs. These trips catered for the hard-core nature enthusiast market, and tourist numbers were low. This reflected the ‘exploration stage’ of Butler’s (2006) hypothetical evolution of a tourist area. Local involvement was minimal and the majority of the villagers were not aware of tourism. Before tourist lodges were developed in Sukau, many of the villagers had never seen tourists.

Historical records show that the population density in the Kinabatangan District has never been high (Vaz, 1993). The lives of the local people have traditionally been focused around the river and forests. This provided them with food, building material, firewood, medicine, and a means of communication and transport. Yet within a largely global transition from subsistence to monetary economies, the local community began to seek alternative activities to earn cash incomes. These activities included logging and agricultural development.

The Kinabatangan was one of the first places in Sabah to be opened for commercial logging. This reached its peak in the 1970s and 1980s, and locals were employed as loggers. Post commercial logging, Kinabatangan communities sold rights to timber on

unclaimed land, and later that land was sold for agricultural development – namely palm oil. Palm oil plantations quickly became (and still is) the predominant land use within the district.

Additional livelihood options during this time included subsistence activities, subsidised cash crops, employment on palm oil plantations, building infrastructure, operating small shops, running transport services, fishing, and developing smallholder palm oil farms. In addition many people relied upon government subsidies and the salaries of those family members employed by the government. Most families in Sukau own land under native title which is able to provide them with food and income supplements.

6.1.2 Objective Two

Describe the current level of tourism in Sukau, in terms of types of activities, timing, number of visitors, number of lodges and other facilities, and cash flow into the area

The current form of tourism in Sukau is marketed as ecotourism. Literature suggests that ecotourism focuses on the impacts of tourist activities on both the environment and the local community, and that these impacts should be positive. Ecotourism is also only said to be occurring if tourism operators intend to contribute to the long-term protection of the area and local development, and in doing so form partnerships with the local people and protected area managers. Study results indicate that although the lodges in Sukau do portray some characteristics of ecotourism, they are not ‘eco lodges’ in the true sense. The main tourism activity on offer in Sukau is wildlife viewing by boat. Thus tourism in Sukau is clearly nature-based, yet results show that ‘true’ ecotourism is not occurring in Sukau.

Sukau has evolved into the hub of tourism in the Lower Kinabatangan. In the year 2000, an estimated 13,000 tourists visited Sukau, and within one year the number of tourists increased to 18,000. In 2006, an estimated 60,500 tourists visited Sukau. This rapid growth in tourist numbers reflects the ‘development stage’ of Butler’s (2006) hypothetical evolution of a tourist area. There was an estimated minimum RM 46,172,543 of cash flow into Sukau through tourism activities in 2006. Approximately RM 45,978,338 (99.6 per cent) of this was via the lodges. However these lodges are owned by ‘outsiders’, approximately half of all lodge employees are non-locals, and there is only limited use of

local goods and services. Hence there is an overwhelming indication of the limited likely benefits of this cash inflow for the Sukau community as a whole.

There are six tourist lodges currently operating in Sukau. All of the lodges currently provide similar services for tourists, and tend to promote their packages which are all inclusive of accommodation, meals, river trips, a jungle walk, and transportation. Within the village itself, there are currently 11 homes involved in the home-stay programme (to differing degrees), as well as a B&B.

An estimated 99 per cent of all visitors to Sukau stay at a lodge. Guest nights at the home-stays are sporadic even during the peak tourism season in Sukau from June-September. The number of guest nights at the B&B appears to be increasing over time, which correlates with increased promotion (particularly in the Lonely Planet Guide). The villagers say that the home-stay programme would also benefit from increased promotion. A number of tourists mentioned that staying at a lodge is an 'easy option'; everything is organised for them, they can pre-book, and therefore it is less stressful. Going to Borneo is perceived to be 'risky' for many Westerners, and they are less likely to want to take risks on this holiday (Travellers, personal communication, July 2007). Some villagers claim that the home-stays and B&B could also offer packages to their guests. If a pre-booking system was established on the internet for these home-stay and B&B packages, and they were also more widely marketed, perhaps more tourists would stay in the village rather than a lodge. This would increase the income of the villagers through these businesses.

Prior to my research, a 1989 tourism feasibility study of the Lower Kinabatangan endorsed the development of Gomantong as a tourist destination. Yet little development seems to have taken place and few tourists currently visit the Gomantong caves (personal observation). It is noted in the Malaysian National Ecotourism Plan 1997 that private sector investment in tourism in the Lower Kinabatangan is heavily concentrated at one site. The plan proposes that tourism should instead be spread along the Kinabatangan River. A number of the Sabah Tourism Master Plan's recommendations for the Sandakan/Kinabatangan Region have also not been put into action. Tourism in Sukau is currently private-sector led and dominated by the lodges. The Plan's recommendations directly involve and affect the lodges in Sukau. As the lodges currently acquire a high level of business, they have little incentive to alter their current operations. The lodges also

operate independently from one another. Perhaps it is for these reasons that the Plan's recommendations have not been implemented. The establishment of a Lodge Association, as planned by WWF, would assist in collaboration between the lodges, and hence may lead to an increased potential for these recommendations to be implemented.

6.1.3 Objective Three

Define the types and extent of tourism impacts on the local people

Tourism impacts on the local people include those which affect employment opportunities, infrastructure development, environmental awareness, and participation. Local people must gain some benefits from conservation if they are to have an incentive to sustainably manage wildlife and other natural resources (Schellhorn, 2007; Scheyvens, 2002). The Sabah Tourism Master Plan mentions that tourism development in Sukau offers potential for using the income generated by tourism to help justify conservation. Yet the Plan stresses that for the tourism-conservation linkage to be effective in Sukau, significant benefits should accrue to the parties which bear the opportunity costs of conservation. This includes government and the local community (Sabah Tourism Master Plan 1996).

Governments of developing countries, such as Malaysia, support tourism as a development tool because it provides employment, improves balance of payments, boosts foreign exchange earnings and is assumed to support regional development (Schellhorn, 2007). The community of Sukau was happy to receive tourism when it first began in Sukau, and they foresaw a brighter future for themselves and their village via this industry. Now the villagers still believe that tourism is good for Sukau. All of the villagers interviewed said that they would like to be involved in tourism in Sukau.

Determine the contribution of tourism to job opportunities and employment for local people

In 2006, tourism directly employed ten per cent of the total population of Sukau. More significantly, 23 per cent of an estimated working population were directly employed by tourism. There are currently eleven homes involved in the home-stay programme in Sukau, and one B&B. Eight locals are employed under RAE.

It is estimated that the six lodges in Sukau employ 88 locals on a fulltime basis. This equates to 7.6 per cent of the total population of Sukau, and 18 per cent of the estimated total workforce. Of the four lodges surveyed, roughly 50 per cent of all fulltime workers are local Orang Sungai. A limitation to employing more locals stated by the interviewed lodge management representatives is that it can be difficult to find good local workers as their working style (which tends to be relaxed and limited to working on demand) does not fit in with the needs of the lodge and the tourists. Locals are more commonly employed by the lodges for physical labour (lower-skilled positions) rather than managerial positions. All of the boatmen employed by the lodges are locals. However the position of boatman tends to be the lowest paid of all the workers at the lodges, and they may only earn RM 200 per month. The majority of the local workers earn RM 312 per month. Although these wages do not include the other benefits provided by working at the lodge (in particular accommodation and meals), it is well below the official poverty line of RM 888 per month. Still many of these people also have subsistence opportunities which reduce their dependence on cash income. Nevertheless, the villagers perceive lodge employment as being hard work for little pay, and because of this there is a high staff turn-over. The lodges of the bigger tour companies do not hire local guides as they are multi-destination companies and require their guides to travel with the customers. Hence the guides need to be qualified to guide in destinations other than Sukau.

Other livelihood sources are relied upon by 90 per cent of the Sukau population (77 per cent of the hypothetical working population). This includes 35 locals employed by KOCP. These employees receive very good training, including opportunities to train overseas. There is potential for the fishermen and boatmen to benefit more from tourism in Sukau.

Most of the training at the lodges is 'on the job', and the lodge management representatives agree that it is important to train the locals. The villagers say that their skills have improved since the arrival of tourism. Many villagers have improved their English language skills - the extent of improvement varies greatly, yet they all seem very proud of this. Skills have also been gained through the local nature guide course and home-stay training. The local villagers would like to receive more training and development opportunities, particularly in English language, tourism management, guiding, and marketing.

Assess the contribution of tourism to infrastructure development such as roads, sanitation, communication, health care facilities and schools

The infrastructure in Sukau village has been improved since tourist lodge development in Sukau, and the villagers believe that tourism was a catalyst for these changes. The changes include maintenance work on the main road to Sukau, two new jetties, an electricity supply, and an IT centre (which is currently inactive).

Some of the lodges in Sukau have directly contributed to infrastructure development in the village. One of the lodges built a dormitory at the high school, offers a scholarship which covers boarding and fees for one student each year, and also gives cash prizes to top students. Books have also been donated to the local schools. Another of the lodges invited a range of doctors to Sukau and hosted them. In return the doctors gave the villagers free medical checks. This lodge has also organised a water tank project where the lodge staff went into Sukau and did a survey of who needed water tanks to harvest rainwater. Rotary International was approached to donate the water tanks, and these were distributed to the villagers by the lodge. Although these contributions appear significant, those living in the village disagree. Only two lodges in Sukau have contributed to infrastructure development in the village and most of these contributions have been ‘one-off’. The villagers say that the assistance given by the lodges to the village of Sukau is minor in reality, and seems to be done more for marketing purposes as it is mentioned on their websites.

The villagers would like to see more improvements to infrastructure, including a clean water supply and a new medical clinic. They say that further improvements to the main road to Sukau will make the village more accessible to domestic tourists. Better access to internet would also assist tourism development in the village as they would be able to market their tourism businesses on the internet. An information centre in the middle of the village would be able to provide information to the tourists and an advertising opportunity for the locals. This could assist and encourage more independent travellers to stay in the village. The Ninth Malaysia Plan 2006-2010 proposes that tourism facilities will be provided and upgraded in tourist areas. This suggests that more tourism-related infrastructure in Sukau will be provided for in the future.

Determine the contribution of tourism to environmental awareness and education of local people, and nature conservation in the area

Tourism is able to provide the villagers of Sukau with an alternative livelihood option other than developing smallholder palm oil plantations. Having this livelihood option has made the villagers more motivated to protect the environment. Tourism has increased their environmental awareness, and they are now more aware and appreciative of the wildlife. The locals of Sukau mention that tourists are coming to view the wildlife, and that it is therefore important to maintain the current environment if tourism is to be sustained in Sukau. They say that they have been able to benefit from environmental education through KOCP and also WWF.

Most of the interviewees think that there have been very few negative environmental impacts from tourism. Instead they have noted improvements in the cleanliness of the village. However tourist boats are causing bank erosion. This is especially noticeable when elephants are being sighted as the guides attempt to get their customers as close as possible to the animals. Regulations are required which restrict how close the boats are permitted to go to the river-bank. The Menanggol River is very popular for wildlife viewing, and currently all of the lodges include a visit to the Menanggol in their packages. This is resulting in over-crowding during the peak season, which causes adverse effects on the environment and wildlife. These are issues for the lodges to address. The establishment of a Lodge Association would assist the development and implementation of appropriate regulations.

Research results indicate that only minor steps are taken by the lodges to minimise their environmental impacts. For example, only the food waste is disposed of in the river. The incentives offered by the lodges for their employees to practice more environmentally sustainable methods are also minimal, with only one lodge formally acknowledging their staff in this aspect. Environmental education of the lodge employees tends to be limited to that which occurs during the everyday running of the lodge.

Yet it should be in the lodges' best interests to protect the environment. They are currently benefiting from the environs and wildlife of the Lower Kinabatangan and their future business success depends on its continued maintenance. Whilst they are gaining financially

from the environment, they generally are not contributing to its upkeep. This is illustrated by one lodge owner who stated that they concentrate on providing services for their guests, and trust that the Sabah Wildlife Department will look after the environment. However one simple way for the lodges to contribute to nature conservation is by actively promoting the Voluntary Conservation Levy to its guests. More pressure should be placed on the lodges to do so. The levy is to assist the SWD to protect the KWS against illegal loggers and poachers. This conservation levy could be automatically included in the package prices, and the lodges could then contribute the same amount as their guests to the conservation fund.

Investigate the extent of community participation in tourism in Sukau

A participatory approach influences positive social changes and attitudes towards tourism and conservation (Mendoza, 2006; Nowaczek et al., 2007; Scheyvens, 2007a). According to the NEP, the intention of tourist development in the Lower Kinabatangan is to promote genuine local involvement in tourism at a pace suited to local conditions. Similarly, Payne's 1989 tourism feasibility study recommended the active involvement of the local community in the management of the sanctuary. Tourism was highlighted as one way to achieve this.

The integrated conservation-ecotourism model outlined in Chapter One illustrates a relationship between tourism, development and conservation. However this relationship is dependent on the local community gaining sufficient benefits from tourism. This will enable them to improve their livelihoods and reduce resource dependencies, and hence generate conservation support. The likelihood of this positive relationship increases with active local community involvement in tourism development. Within Pretty et al's 1995 'typology of participation', research results indicate that the current level of community participation in tourism in Sukau is that of 'participation for material incentives' (refer Appendix 1). This form of participation is said to occur when people participate by providing resources (i.e. labour) in return for food or cash. Scheyvens (2002) suggests that this is a form of passive participation. Hence the community of Sukau has limited control over tourism development in their village and their involvement in it. This indicates that the relationship between tourism, development and conservation, as illustrated in the integrated conservation-ecotourism model, is currently not optimal in Sukau.

In Sukau it is evident that the lodge owners undertook very little consultation with the locals during the initial stages of lodge development. Consultation was limited to the owners of the land in which they were interested. Most of the lodge's goods and materials are not sourced locally but instead are bought in from Sandakan. However the lodge's boats are built locally and locals employed as boatmen. This is an important form of income for some villagers. Two of the lodges interviewed had bought their land off locals, while the other two lodges rent the land from locals. Leasing land (rather than selling) is a good form of regular income. Government policies also favour the retention of land titles by Bumiputra.

A number of constraints to active local community participation in tourism ventures were identified in the literature. These limitations include finance, skills, knowledge, education, and social resources. These constraints to active tourism involvement by the villagers are apparent in Sukau. Indeed, finance for development was the most consistent limitation to tourism involvement mentioned by the villagers. It was suggested by some of the villagers that financial assistance could be offered from the government. The villagers also said that increased training opportunities would help enhance their involvement in tourism.

Results indicate that the villagers of Sukau would like to be more involved in tourism. An institutional framework is required which aims to resolve the best way to meet the needs of the locals in terms of tourism in their village. They are particularly enthusiastic to open B&Bs, and also mention that the local community should form mutually beneficial partnerships with the lodges.

6.1.4 Objective Four

Investigate the local community's perceptions of tourism

The villagers believe that Sukau has high tourism potential. They say that tourism should be retained and maintained in Sukau, and should continue to develop.

Yet the majority of those villagers interviewed disagreed that tourism currently benefits their community sufficiently. They stressed the fact that not everyone is benefiting from

tourism and that more involvement is needed. The villagers perceive that the lodge owners currently benefit the most from tourism in Sukau. However other village interviewees disagreed with this view. They say that the locals are able to learn a lot through tourism, and they have the opportunity to become involved if they choose to. Tourism has diversified their livelihood options, and hence is important for generating income in the village.

Still, tourism can, and should be, improved in Sukau so that it brings more benefits for the locals. The villagers say that in order for this to occur then a number of aspects need attention. The suggestions include community consultations, taking care to maintain the current environment, and diversifying Sukau's tourism product beyond wildlife viewing. The village interviewees also suggested that the local community should form mutually beneficial partnerships with the lodges, develop a community cooperative, and increase the number of home-stays and B&Bs in the village. Those interviewed also believe that a further improvement to the village's infrastructure is necessary for tourism growth in Sukau. The villagers say that the major stakeholders involved in the management of the KWS and tourism development in Sukau should take responsibility for facilitating the above issues. These stakeholders include the Sabah Forestry Department, Sabah Wildlife Department, and the Ministry for Tourism Development, Environment, Science and Technology, HUTAN, KOCP, RAE, and WWF.

6.1.5 Objective Five

Investigate the local people's visions for livelihood options and nature conservation in the future

Three major livelihood options emerged from this research, each of which affects conservation to a greater or lesser degree. These options are: palm oil development; direct involvement in tourism; and indirect involvement in tourism.

Half of the villagers interviewed plan to become (or remain) involved in oil palm farming in the future. This is easily the most popular livelihood option in Sukau, as they view smallholder palm oil farms as being lucrative. Still they should be aware of its possible downfalls. For reasons previously explained, crop damage and hence financial losses

through wildlife invasions and flooding is common-place in Sukau. There are high initial costs in developing a palm oil plantation, with a significant 'lag time' (six to seven years) before the plantation is able to be profitable. As smallholder farms tend to be family businesses, the villagers should not view the net profit as being only one person's monthly income. In addition, the current financial crisis (2008-9) has highlighted the vulnerability of smallholder farmers. Palm oil prices have plummeted, and farmers in the Kinabatangan have now been forced to let their oil palm fruits rot (Nadzmi, 2008). WWF should be highlighting some of these issues to the local community of Sukau. An increase in palm oil plantations will further fragment the forested areas in the region. It is likely that this will also result in increased wildlife conflicts. Hence in terms of achieving a balance between livelihoods and nature conservation in Sukau it should be a priority to discourage further palm oil development in the Lower Kinabatangan. This is particularly relevant in light of the implications of the recent fall in palm oil prices for smallholder farmers.

Yet those who plan to be involved in oil palm also plan to combine this livelihood option with other options – namely direct involvement in tourism. Some of the local people's visions for diversifying their livelihoods while protecting their environment include: developing a jungle camp; creating a true 'eco-lodge'; becoming re-involved with the home-stay programme; opening B&Bs; making and selling handicrafts to tourists; renting houses; fishing; fish and prawn farming, chicken farming, and growing fruit and vegetables. The villagers are particularly enthusiastic about opening new B&Bs.

Although the majority of tourists to Sukau are currently foreign visitors, domestic tourism looks set to increase in Sukau in the future. The Malaysian Government states in the Ninth Malaysia Plan 2006-2010 that domestic tourism will be further developed and will remain a priority. The sealing of the main road to Sukau will increase the accessibility of Sukau as a destination for domestic tourists. Additionally the current financial crisis (2008-9) may boost domestic tourism to Sukau as Malaysians with disposable income look for more affordable holiday destinations. It is expected that the demand for village accommodation (home-stays and B&Bs) will increase with a growth in domestic tourism as they are more affordable options than staying at a lodge. Hence a growth in domestic tourism may prove to be positive for the locals of Sukau by increasing their benefits through tourism.

Butler (2006) suggests that with time, tourist areas such as Sukau which are in the 'development stage' will then enter a 'consolidation stage'. This is when tourist numbers continue to increase, yet at a decreased rate of growth. Once capacity levels for a number of variables have been met or exceeded, Sukau may then enter the 'stagnation stage'. Tourist development is then open to several interpretations which can result in either a 'decline stage', or else a 'rejuvenation stage'. However these stages are all dependent on a number of internal and external factors such as the rate of development, numbers of visitors, capacity levels, protection of resources, accessibility, numbers of similar competing areas, government policies, and catastrophic events such as war and disease. Hence it is difficult to accurately predict Sukau's future tourism trends. Yet the village is, in terms of Butler's hypothetical evolution of a tourist area, still well inside the 'development stage' of tourism progression.

6.1.6 Wildlife conflicts

As previously emphasised, it is the biodiversity values, particularly of the unique and endangered fauna, which underlie the importance of the KWS for international wildlife conservation. Yet wildlife conflicts in Sukau are problematic. Elephant numbers in the area have increased considerably, while the 'boom' in palm oil plantations has resulted in habitat loss for the elephants. This is resulting in a movement of elephants which are causing increasing conflicts with the villagers. They feed on the crops of the villagers who are unable to afford such protection measures as electric fencing. Monkeys, pigs and orang-utans also come from the KWS and invade villager's crops. The villagers risk losing their entire livelihood from just one wildlife invasion. As these animals are now protected the locals are not able to defend their crops by shooting the wildlife. Yet they do not receive any form of compensation if their crops are affected. The villagers believe they should be compensated when their livelihoods are damaged by wildlife.

One solution suggested by the villagers is for the NGOs, government departments and tourism stakeholders to give the villagers financial assistance to protect their local crops with electric fencing. These are the groups that benefit from the increasing number of elephants being contained within a decreasing habitat as the tourists are better able to view

them. The international conservation ‘community’ is likewise a benefactor from increases in population and protection of this rare and endangered species.

WWF is currently negotiating with landowners to set-aside some of their land to serve as wildlife corridors. The Sabah Water Resources Enactment 1998 requires that landowners establish a riparian reserve within 20 metres of the river bank. Although this regulation is often ignored, it does remain a legal requirement and therefore can be legally enforced. These riparian reserves would assist in the creation of wildlife corridors which would help to link the fragmented forested areas and thereby provide paths for wildlife migration and increased access to food resources. In turn it is hoped that this could reduce wildlife conflicts with the villagers. This is further mentioned in the final section of this thesis.

6.1.7 The home-stay programme

Currently there are eleven home-stay operators in Sukau. This equates to one per cent of the total population, or more significantly, 2.3 per cent of the estimated total workforce of Sukau. All of the home-stay operators and/or their partners were born in Sukau. This indicates that the home-stay programme particularly involves locals.

It is unknown how many guests the Sukau home-stays received in 2006. Neither the home-stay operators nor the secretary of the home-stay programme keep any written records of guest numbers. However the operators do say that they have had fewer guests in recent years. They believe that this correlates with the decreased promotion of the home-stay programme which occurred once WWF ceased their involvement. Hence, in order to attract more guests, the home-stay programme should be more vigorously marketed and promoted by the Sabah Home-stay Association. This needs to be managed in a professional manner, with internet and/or telephone bookings being possible. An information centre/board in the middle of the village with home-stay information would also be useful. As the coordinator and secretary of the home-stay programme are currently rather inactive in their roles, the other home-stay operators believe that these positions should be rotated amongst others involved in the home-stay programme. This would ensure that just two people will not always control and influence the programme.

The home-stays currently charge a daily rate of RM 20 per person. Lunch and dinner is also available for RM 10. These rates are similar to those at the B&B, however they are markedly lower than those charged by the lodges and RAE. Some of the home-stay operators stated that the current home-stay rates are too low. The lodges and RAE have packages which are all inclusive of accommodation, meals, river trips, a jungle walk and transportation, whereas the home-stays (and B&B) prices only include accommodation. The villagers say that the home-stays could develop additional activities and also offer packages to their guests. This would increase their benefits through tourism. There has been no price review since the programme was established in 2002.

The home-stay operators say that the income from their home-stay business is too irregular and that they do not have enough guests. Yet the villagers believe that the demand for home-stay accommodation will increase with an increase in domestic tourism. This is expected to occur when the main road to Sukau is sealed. It was also mentioned that there is currently an unequal distribution of guests. A rotation system whereby home-stay operators are offered guests in turns (similar to that used by the Miso Walai and Abai home-stay programmes) would ensure that all home-stays have a fair opportunity to host guests.

The five original home-stay operators received training and assistance from WWF. However WWF has since ceased their involvement in the programme, and no training and assistance has been offered to the home-stay operators since then. The home-stay operators are particularly keen to receive more English language training so that they are able to communicate with their guests. RAE uses the home-stay to accommodate their guests. Hence they should be offering assistance to the home-stay operators as it is in their best interests to ensure a quality service for their guests.

Currently the registration of a home-stay is for the home, not the operators. Therefore if the home-stay operators move out of their registered home then they are no longer registered to receive home-stay guests in their new home. Also, once a home is registered there are no further checks to ensure that the standards are being maintained. These are issues that should be reviewed by the Home-stay Association.

The home-stay programme has good potential for providing the locals with an opportunity to benefit from tourism. Yet this potential is currently not being met. An extensive review of the above issues by the Sabah Home-stay Association and RAE is required if the locals of Sukau are to benefit more from tourism in the future.

6.2 Summary of research findings

In assessing and evaluating the impacts of tourism on the village of Sukau in the Lower Kinabatangan District, Sabah, Malaysia, a number of significant issues are apparent.

The tourism potential of the Lower Kinabatangan helped to justify the protection of wildlife by establishing the Kinabatangan Wildlife Sanctuary. Tourism in Sukau is now based on wildlife viewing, and the majority of tourists come to view the flagship species of the KWS – namely orang-utans, Bornean pygmy elephants, proboscis monkeys, and hornbills. These species all require a large forested area. This is provided for (to a certain degree) by the protection status of the KWS. Hence tourism and nature conservation in Sukau are inter-dependent.

In 2006, ten per cent of the total population of Sukau, and 23 per cent of the estimated total workforce were directly employed by tourism. The majority of these locals work in the lodges. Other forms of direct tourism employment include the home-stay programme, the B&B, and RAE. Having tourism as a livelihood option has made the villagers more motivated to protect their environment. Their environmental awareness has increased, and they are now more appreciative of the wildlife. Environmental education has been provided through KOCP and WWF. The infrastructure in Sukau village has been improved, and it is likely that tourism was a catalyst for these changes.

Although these benefits appear significant, the majority of those villagers interviewed disagreed that tourism currently benefits their community sufficiently. They say that not everyone is benefiting and more involvement is needed. An additional issue is that of increased wildlife conflicts. Increased numbers of wildlife are now invading and feeding on the crops of villagers. Some of the villager's livelihoods are now at risk. The majority of these villagers are unable to afford protection measures such as electric fencing, and

they are unable to shoot the wildlife due to its protection status. Hence the villagers want assistance to protect their crops, or to be financially compensated when their livelihoods are damaged by wildlife. This ought to be the responsibility of the Ministry for Tourism Development, Environment, Science and Technology, and the Sabah Wildlife Department.

Smallholder palm oil farming is widely viewed as a lucrative livelihood option amongst the villagers of Sukau. Many villagers own land under native-title. The majority of this land is still forested, yet over half of those interviewed plan to use this land for smallholder farming in the future. There are a number of significant possible downfalls of smallholder palm oil farming that the locals should be aware of. The villagers need to be fully informed of these issues, and WWF and other NGOs should play an active role in doing so.

The prospect of further land use changes for palm oil development will have severe implications for nature conservation and tourism in Sukau. Wildlife, and in particular those flagship species for which the majority of tourists come to Sukau to view, require a large forested area. If this forested area is reduced or further fragmented, the viability of these populations could be threatened. Furthermore, if people are no longer able to view these animals in the wild then there will be less incentive for tourists to visit Sukau. Currently the two major land use options of palm oil development and tourism are conflicting and have resulted in fragmented ecosystems. Tourism in Sukau will only be able to prosper when this conservation dilemma is resolved.

However, the current financial crisis has complicated the likely contribution of tourism to livelihoods and conservation in the future. Both the palm oil industry and the tourism industry have suffered due to the economic downturn. The recent crash in palm oil prices from RM 4,486 per tonne in March 2008 to RM 1,500 per tonne (Nadzmi, 2008) has highlighted the vulnerability of smallholder farmers in the Kinabatangan. This may discourage locals from pursuing this livelihood option in the near future. Although long-haul tourist destinations have now become less viable to travellers, this may have positive implications for Sukau as a tourist destination. Sabah is centrally located between Europe, the Americas, and Australasia (from where the majority of visitors to Sukau come). Their local currencies do well against the Malaysian Ringgit; hence Sukau is a relatively inexpensive destination for them. It is also possible that domestic tourism to Sukau could be boosted as Malaysians with disposable income look for closer (and therefore more

affordable) holiday destinations. The financial crisis may also increase the demand for village accommodation (home-stays and B&Bs) as these are more affordable options for travellers on tighter budgets. This will bring more direct benefits to the locals of Sukau.

Still, it is likely that with time, both the palm oil and tourism industries will recover from the current financial crisis, and hence they will both be livelihood options for the villagers of Sukau in the future. Therefore steps should be made to improve both industries for the benefit of livelihoods and nature conservation in Sukau.

6.3 Implications of the research

The findings of this research on the impacts of tourism on Sukau village have a number of implications. This includes provisions for improving the tourism industry in Sukau to bring more benefits to the locals, and the potential for future research projects.

6.3.1 Practical recommendations

- De-reserving the forest reserves in the Lower Kinabatangan and giving the SWD full jurisdiction over the protected area. This would increase the size of the Wildlife Sanctuary and aid management of the region.
- Efforts to improve the environmental sustainability of the palm oil industry should include the continued support for the Roundtable on Sustainable Palm Oil (RSPO). The owners of oil palm estates and private landowners are being encouraged by WWF to set aside some land to help form wildlife corridors. WWF has also put forward a policy to government which will restrict forest clearance on private land due to its conservation value. If accepted, this will prevent more forested areas being cleared for palm oil plantations.

Some potential ways in which tourism could be improved in Sukau to bring more benefits to the locals have emerged from my research. These include:

- Developing mutually beneficial partnerships between the local community and the lodges. This could include increased utilisation of local fishermen and boatmen. In doing so, the village could also focus on offering more day activities for tourists, rather than rely on overnight stays. The lodges and the local community of Sukau themselves should instigate this.
- A thorough revision of the home-stay programme by the Sabah Home-stay Association as well as RAE.
- The establishment within Sukau of a central tourism development body which coordinates tourism development, marketing and promotion. The Ministry for Tourism Development, Environment, Science and Technology should be responsible for this. They should also provide leadership in each of the suggested developments outlined below.
- A cultural centre in the village. This will diversify the tourism product, and potentially help to revive local culture amongst the community.
- Training on handicraft making. These crafts can then be sold to tourists as souvenirs.
- The formation of a community tourism cooperative, which provides village accommodation, uses local produce, guides, boat services and transport services.
- Preparations for an increase in domestic tourism, especially when the road improvements are completed. It is expected that home-stay and B&B accommodation will be in more demand with increased domestic tourism.

If these suggested improvements are made, then the effectiveness of tourism as an alternative livelihood source for the locals of Sukau will be enhanced.

6.3.2 Future research

Through this research it has become apparent that there is a clash in land use ideals between further palm oil development, and the needs for the area as a conservation site. This clash in land use has resulted in a fragmented landscape and habitat loss for wildlife. This has exacerbated wildlife conflicts with the villagers as the wildlife is now forced to search for food outside of the forested areas. Greater understanding of the carrying capacity of the Kinabatangan Wildlife Sanctuary for the previously mentioned flagship and keystone species is required. Furthermore, strong ecological research which investigates the relationships between this carrying capacity, the potential for further habitat fragmentation, and the importance of wildlife corridors would be extremely valuable. More information is required on the appropriate location and size of these corridors, and the likely benefits of these corridors for wildlife. The potential for the state government, NGOs or the wider international community to purchase areas of land to establish wildlife corridors should also be investigated. These research findings could strengthen the management of the KWS, the security of these flagship species, the protection of villagers crops, and hence tourism in the area.

A lack of accurate and defensible base-line information delayed this research. Further gathering of base-line information and increased accessibility to this information would aid future research in the village.

Due to time constraints, research did not proceed as proposed in all four villages along the Lower Kinabatangan River which are currently involved in tourism. The JKKs and Head of Villages were all very enthusiastic for this research to take place in their village. Hence there is an opportunity to assess and evaluate the impacts of tourism on each of these villages. Pooling the results would provide a more comprehensive validation of overall impacts of tourism on the Kinabatangan District.

That a number of recommendations made by the Sabah Tourism Master Plan for tourism in Sukau have not been implemented, suggests that research should be undertaken to better understand the other related issues which may be preventing the implementation of such recommendations.

6.4 Conclusion

This study has assessed and evaluated the impacts of tourism on the village of Sukau in the Lower Kinabatangan District, Sabah, Malaysia. The research findings identify that although tourism does bring significant benefits for the village of Sukau, the villagers are not sufficiently content with this and say that there should be more local involvement. The research findings also indicate that the two major land use options of palm oil development and tourism are conflicting and have resulted in a fragmented landscape, and hence, fragmented ecosystems. This has a detrimental effect on both the tourism product and nature conservation in Sukau. Although tourism may not be the sole ‘answer’ for enhancing livelihood options and nature conservation in the village, the current rate of tourism development in Sukau, combined with the eagerness of the locals to be involved in the industry, illustrate that tourism should have a future in Sukau. These findings have provided a basis for a number of proposed recommendations for improving both the palm oil and tourism industries for the benefit of livelihoods and nature conservation in Sukau. By making these improvements, more locals of Sukau will be able to depend on tourism as a livelihood option. Consequently there will be less financial pressure for forested private land to be cleared for palm oil, and important ‘ecological links’ for the KWS will remain. This will help to ensure sustained wildlife conservation in the Lower Kinabatangan, and hence guarantee the continued protection of the tourism product of Sukau village.

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Appendix 1 Pretty et al.'s typology of participation

Passive participation: People participate by being told what is going to happen or has already happened. The information being shared belongs only to the externals.

Participation in information giving: People participate by answering questions posed by external researchers. People do not have the opportunity to influence proceedings; information is not shared.

Participation by consultation: People participate by being consulted, and external people listen to views. Externals define the problems and solutions and may modify these depending on people's responses.

Participation for material incentives: People participate by providing resources (i.e. labour in return for food or cash). They have no stake in prolonging activities when the incentive ends.

Functional participation: People participate by forming groups to meet specific objectives related to the project. This involvement does not tend to be at early stages of the project cycle or planning, but after major decisions have already been made.

Interactive participation: People participate in joint analysis, which leads to action plans and the formation of new local institutions or the strengthening of existing ones. These groups take control over local decisions; therefore they have a stake in maintaining structures or practices.

Self-mobilisation: People participate by taking initiatives independent of external institutions to change systems. They develop contacts with external institutions for resources and technical advice which they need, however retain control over how resources are used.

(Sourced from: Pretty, Guijt, Thompson, & Scoones, 1995, p. 61)

Appendix 2 Policies and plans

There are a number of policies and plans relevant for the management of the Lower Kinabatangan District. Some of the more applicable legislation is outlined below. Unfortunately there was difficulty in accessing many of these policies and plans from a variety of potential sources, even with many attempts. It was particularly difficult to obtain copies of the Sabah Tourism Master Plan (1996), and the Malaysian National Ecotourism Plan (1997). This indicates they are not readily available to the general public and/or researchers, and perhaps are not so well-known, utilised and enforced.

The Land Ordinance 1930

The Land Ordinance was established in 1930 to “regulate the alienation and occupation of State lands” (Land Ordinance Sabah Cap 68 1930). Native land rights are addressed in Part IV of the Land Ordinance.

Land Capability Classification 1963

Land capability classification (LCC) categories and maps prepared for the 1976 Land Resources Survey continue to guide the allocation of land use in Sabah (McMorrow & Talip, 2001). The priority of land use allocation has historically been mining, agriculture, forestry and recreation/wildlife, in accordance with the perceived order of highest monetary return.

Forest Enactment 1968

The Forest Enactment 1968 is the principal forestry law in Sabah, and is concerned with the gazettelement, use and management of forest reserves.

Sabah Tourism Master Plan 1996

The Sabah Tourism Master Plan 1996 was endorsed and accepted by the Sabah State Government as the guiding document for the development of the Sabah tourism industry for the period 1995 – 2010.

Malaysian National Ecotourism Plan 1997

The National Ecotourism Plan (NEP) was prepared by WWF-Malaysia and has been formally adopted by the Government of Malaysia to assist at Federal and State levels for the development of Malaysia’s ecotourism potential. The Plan is intended to serve both as an appropriate instrument for Malaysia’s overall sustainable development targets, as well as an effective tool for conservation of the natural and cultural heritage of the country (Kaur, 2006). The Lower Kinabatangan is specifically identified as a key ecotourism ‘hot-spot’ in the plan.

Wildlife Conservation Enactment 1997

The Wildlife Conservation Enactment 1997 is

“an enactment to make provisions for the conservation and management of wildlife and its habitats in the state of Sabah for the benefit and enjoyment of the present and future generations of the people of the State of Sabah” (Wildlife Conservation Enactment 1997).

The Sabah Wildlife Department is responsible for the implementation and administration of the Sabah Wildlife Conservation Enactment, 1997.

Sabah Water Resources Enactment 1998

The Sabah Water Resources Enactment 1998 is

“to provide for the sustainable management of the water resources of the State of Sabah...” (Department of Irrigation and Drainage Sabah Malaysia, 1998).

It is clearly stated in Clause 40 that land owners must establish a riparian reserve of 20 metres. This is for the protection of the flow of the water body and for preventing the degradation of the quality of water resources and damage to the aquatic environment (Steel, 2000).

The Ninth Malaysia Plan 2006-2010

The Ninth Malaysia Plan 2006-2010 allocates the national budget from 2006 to 2010 to all economic sectors in Malaysia.

Kinabatangan Wildlife Sanctuary Management Plan

The Management Plan for the Kinabatangan Wildlife Sanctuary was due in 2008, three years after the area was declared a Wildlife sanctuary (this is a requirement under the Wildlife Conservation Enactment 1997), but it has yet to be released. Additionally, WWF contracted a specialist (Dr. Janet Cochrane) in May 2007 to draw up a Tourism Master Plan for the Kinabatangan District; not just the Wildlife Sanctuary. This was deemed necessary as the lodges and villages etc are located outside of the Wildlife Sanctuary, therefore there is a need to look at the area more holistically. However this document also is yet to be published, and therefore was unavailable at the time of writing.

International obligations

Malaysia ratified the Convention on Biological Diversity on 24th June 1994, and therefore must incorporate into the national policy the set of commitments under the treaty, namely

“to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth” (Convention on Biological Diversity, 2008).

Appendix 3 Letter to lodges from SFD

No. Faks : 089-669396
Telefon : 660811
Telegram: "FORESTS SANDAKAN"



JABATAN PERHUTANAN
Beg Berkunci No. 68
90009 Sandakan
Sabah, Malaysia

Bilangan Kami: JPHTN/PPP/SL:21/01/JLD.I/4

Bilangan Tuan: 6 July 2007

Ms Amy Chin
S.I.Tours Sdn. Bhd

Mr Albert Teo, Managing Director
Borneo Eco Tours, Kota Kinabalu

Mr. Eugene Tan
Uncle Tan's Jungle Camp
Mile 16, Jln Gum Gum
Sandakan

Mr Albert Wong, General Manager
Locked Bag 23
88992 Kota Kinabalu

Datuk John Lim
Sepilok Jungle Resort
Km 22, Labuk Road
P.O.Box 2082
90723 Sandakan

Mr Cede Prudente
Tomangong Riverview Lodge, Sandakan

Mr Alex Yee
Nasalis Larvatus Tours & Travel
Lot 226, 2nd Floor, Wisma Sabah
Jln Tun Abdul Razak
8800 Kota Kinabalu

Mr Wembley Mogindol
Sipadan Dive Centre
A 1103, 11th Floor, Wisma Merdeka
Jln Tun Razak
88000 Kota Kinabalu

Mr. Robert Chong
Kinabatangan Jungle Camp

Mr Stephen Liew
Wildlife Expeditions
P.O.Box 22687
88786 Luyang, Sabah

Study on Local Community Participation in the Tourism Industry in the Lower Kinabatangan

This is to inform that the Forestry Department is conducting the above-mentioned study with the main objectives being 1) to assess the mode of involvement of local communities in the tourism industry, 2) its' significance to their livelihood, and 3) the success of village homestays. The scope of this study will require the input of tour and lodge operators in the Kinabatangan area.

Ms. Rosalie Corpuz has been appointed by the Department as a short-term consultant to assist in data collecting. Therefore, she is expected to contact you within the next two weeks to arrange for a meeting with you or your designated representative. The meeting basically entails the answering of a simple questionnaire.

The overall results of the study will be made available to all survey participants upon completion, and all information pertaining to individual operators will be kept confidential.

Thank you for your time and cooperation.

Yours sincerely,

[DATUK SAM MANNAN]
Director
Sabah Forestry Department

MEMBASMI DADAH TANGGUNGJAWAB KITA BERSAMA
MARILAH BERTINDAK SEGERA

Appendix 4 Translation of Permission form



Ecotourism study in the Lower Kinabatangan

To ensure that the local Orang Sungai adequately benefit from ecotourism in the lower Kinabatangan, research into the distribution of benefits from this activity is required for sustainable tourism planning and community development. Research will be undertaken in Sukau and will involve members of the local communities and lodge managers.

As part of this research, members of your village will be interviewed. Questions will be asked on their current involvement in tourism, the impacts of tourism, and the future aspirations of the village.

A copy of the final report will be given to you and made accessible to all those that have participated in the research. Therefore this research will be able to provide you with valuable information for tourism planning and local community development.

This research is being supported by the Sabah Forestry Department.

Your participation is very much appreciated.

I have read and understood the description of the above-named project. On this basis I agree that research may be undertaken in my village, and I consent to publication of the results of the project with the understanding that anonymity will be preserved. I understand also that I may at any time withdraw my support from the project, including withdrawal of any information which has been gathered within my village.

Name: _____

Position: _____

Village: _____

Signed: _____ Date: _____

Research Ethics:

Participation in this research is on a voluntary basis. Participants have the right not to answer any question and also to withdraw at any given point in time. The data derived from the interviews will be stored in a password-protected computer. It will not contain any information that could directly identify the information to participants personally.

Appendix 5 Sukau permission form



Kajian Ekopelancongan di Ulu Kinabatangan

Untuk memastikan bahawa Orang Sungai setempat mendapat kebaikan sepenuhnya dari aktiviti ekopelancongan di Ulu Kinabatangan, kajian tentang taburan keuntungan dari aktiviti ini diperlukan bagi pembangunan masyarakat dan perancangan pelancongan yang berkekalan/mapan. Kajian akan dijalankan di Sukau dan akan melibatkan ahli-ahli keluarga masyarakat setempat dan pengurus-pengurus penginapan.

Sebagai sebahagian dari kajian ini, penduduk kampung anda akan ditemubual. Soalan akan diajukan tentang penglibatan semasa mereka dalam pelancongan, kesan pelancongan dan harapan/keinginan kampung tersebut.

Satu salinan laporan akhir akan diberikan kepada anda dan akan disediakan dalam mana ia boleh difahami oleh mereka yang telah mengambil bahagian dalam kajian berkenaan. Dengan itu, kajian ini akan memberikan anda maklumat yang penting bagi pembangunan masyarakat setempat dan perancangan pelancongan.

Kajian ini telah disokong oleh Jabatan Perhutanan Sabah.

Penyertaan anda amat dihargai sekali.

Saya telah membaca dan memahami isi kandungan dan maksud projek yang dinyatakan di atas. Oleh sebab itu, saya setuju kajian ini dilakukan di kampung saya, dan saya rela keputusan projek tersebut diterbitkan dengan pemahaman bahawa segala rahsia akan dipelihara. Saya juga faham bahawa saya boleh menarik sokongan saya kepada projek ini pada bila-bila masa sahaja, termasuk menarik balik sebarang maklumat yang telah diperolehi dari kampung saya.

Nama: SAHARON BIN AHMAD 480628-12-5163

Peranan: KETUA KAMPUNG

Kampung: SUKAU

Tandatangan: X [Signature] Tarikh: 18/07/07



Etika/tatasusila kajian:

Penyertaan dalam kajian ini adalah secara sukarela. Peserta mempunyai hak untuk tidak menjawab sebarang soalan dan juga untuk menarik diri pada bila-bila masa sahaja. Data yang diperolehi dari temubual tersebut akan disimpan dalam komputer yang dilindungi dengan kata-laluan. Data berkenaan tidak akan mengandungi sebarang maklumat yang merujuk terus kepada peserta secara peribadi.

Appendix 6 Abai permission form



Kajian Ekopelancongan di Ulu Kinabatangan

Untuk memastikan bahawa Orang Sungai setempat mendapat kebaikan sepenuhnya dari aktiviti ekopelancongan di Ulu Kinabatangan, kajian tentang taburan keuntungan dari aktiviti ini diperlukan bagi pembangunan masyarakat dan perancangan pelancongan yang berkekalan/mapan. Kajian akan dijalankan di Sukau dan akan melibatkan ahli-ahli keluarga masyarakat setempat dan pengurus-pengurus penginapan.

Sebagai sebahagian dari kajian ini, penduduk kampung anda akan ditemubual. Soalan akan diajukan tentang penglibatan semasa mereka dalam pelancongan, kesan pelancongan dan harapan/keinginan kampung tersebut.

Satu salinan laporan akhir akan diberikan kepada anda dan akan disediakan dalam mana ia boleh difahami oleh mereka yang telah mengambil bahagian dalam kajian berkenaan. Dengan itu, kajian ini akan memberikan anda maklumat yang penting bagi pembangunan masyarakat setempat dan perancangan pelancongan.

Kajian ini telah disokong oleh Jabatan Perhutanan Sabah.

Penyertaan anda amat dihargai sekali.

Saya telah membaca dan memahami isi kandungan dan maksud projek yang dinyatakan di atas. Oleh sebab itu, saya setuju kajian ini dilakukan di kampung saya, dan saya rela keputusan projek tersebut diterbitkan dengan pemahaman bahawa segala rahsia akan dipelihara. Saya juga faham bahawa saya boleh menarik sokongan saya kepada projek ini pada bila-bila masa sahaja, termasuk menarik balik sebarang maklumat yang telah diperolehi dari kampung saya.

Nama: RUKEE MOLTO YUSOFF MADACTIA

Peranan: PENYALARAS HOME STAY, TIM. JKKK K. ABAI,

Kampung: ABAI, KINABATANGAN

Tandatangan: Ryut Tarikh: 24-8-2007

Etika/tatasusila kajian:

Penyertaan dalam kajian ini adalah secara sukarela. Peserta mempunyai hak untuk tidak menjawab sebarang soalan dan juga untuk menarik diri pada bila-bila masa sahaja. Data yang diperolehi dari temubual tersebut akan disimpan dalam komputer yang dilindungi dengan kata-laluan. Data berkenaan tidak akan mengandungi sebarang maklumat yang merujuk terus kepada peserta secara peribadi.

Appendix 7 Lodge questionnaire

The following questionnaire seeks information about ecotourism in the Lower Kinabatangan. As part of this research, lodges as well as members of the local community will be interviewed. The final report will be made accessible to all tourism stakeholders; therefore this research will provide you with valuable information for business planning and local community development.

This research is being supported by the Sabah Forestry Department.
Your participation is very much appreciated.

I have read and understood the description of the above-named project. On this basis I agree to participate in the questionnaire, and I consent to publication of the research results with the understanding that anonymity will be preserved. I understand also that I may at any time withdraw from the project, including withdrawal of any information I have provided.

Name: _____

Position: _____

Lodge: _____

Signed: _____ Date: _____

Research Ethics:

Your participation in this survey is on a voluntary basis. You have the right not to answer any question and also to withdraw at any given point in time. The completed questionnaire will be stored in a secure place and will be destroyed at the end of the research. The data derived from the questionnaire will be stored in a password-protected computer. It will not contain any information that could directly identify the information to you personally. Information on wages and other sensitive data will not be shared with other lodge owners or with representatives of the state.

Please note that for the purpose of this questionnaire, a 'local person' is an orang sungai from the Kinabatangan District.

- Location of lodge: _____
- Name of lodge: _____
- Company: _____
- Your name: _____
- Position in lodge: _____
- Year that this lodge started: _____

Lodge Information

Q1) How many guest nights did the lodge have last year?

Q2) What are your busiest months in terms of numbers of tourists?

Q3) What services does your lodge currently provide for tourists? (Please tick all those that are applicable)

- ☐ Accommodation
- ☐ River trips
- ☐ Jungle walks
- ☐ Meals
- ☐ Other (please explain) _____

Q4) How much do you charge (MYR) for the following services?³⁵

- Accommodation: _____/night
- River trips: _____/person
- Jungle tours: _____/person
- Meals: _____/main meal
- Other: (please provide details) _____

Q5) What are the lodge's main reasons for being involved with ecotourism? (please rank from 1-4; 1 = most important, 4 = least important))

- ☐ Economic profit
- ☐ Provide benefits to locals
- ☐ Interest in wildlife
- ☐ Nature conservation concerns

Employee Demographics

Q6) How many people does the lodge employ?

- Fulltime: _____
- Part time: _____
- Seasonal: _____

³⁵ Ask for a schedule of charges, and any discounts available.

Q7) How many of the lodge's employees are local Sabahans?

- Fulltime: _____
- Part time: _____
- Seasonal: _____

Q8) How many of the lodge's employees are from the local community³⁶?

- Fulltime: _____
- Part time: _____
- Seasonal: _____

Q9) How many of the lodge's employees are originally from the village?

- Fulltime: _____
- Part time: _____
- Seasonal: _____

Q10) Locals are employed by the lodge whenever possible

- ☐ Strongly agree (Go to Q12)
- ☐ Agree (Go to Q12)
- ☐ Disagree
- ☐ Strongly Disagree

Q11) For which reasons do the lodge chose not to employ local people?

Q12) What ages are the lodge's (local) employees?

- 15-19years (Number of employees): ____
- 20-25years (Number of employees): ____
- 26-39years (Number of employees): ____
- 40-59years (Number of employees): ____
- 60+years (Number of employees): ____

Q13) How many of these (local) staff are males and females?

- ☐ Males: _____
- ☐ Females: _____

Q14) What level of education do the lodge's (local) employees have? (Please tick and answer all those that are applicable)

- ☐ University degree Number of employees: _____
- ☐ Completed secondary school Number of employees: _____
- ☐ Completed SPM Number of employees: _____
- ☐ Completed PMR Number of employees: _____
- ☐ Completed primary school Number of employees: _____
- ☐ No formal qualifications Number of employees: _____
- ☐ Specialised training Number of employees: _____

³⁶ Please only include those staff considered as being from the local community in your responses to the following questions. Please note that for the purpose of this questionnaire, a 'local' is an Orang Sungai from the Kinabatangan District.

Q15) What roles do the (local) employees have? (Please tick all those that are applicable)

- ☐ Guides Number of local employees: _____
- ☐ Housekeeping Number of local employees: _____
- ☐ Cooks Number of local employees: _____
- ☐ Kitchen staff Number of local employees: _____
- ☐ Waiter/Waitress Number of local employees: _____
- ☐ Boat operator Number of local employees: _____
- ☐ Maintenance Number of local employees: _____
- ☐ Gardener Number of local employees: _____
- ☐ Administration Number of local employees: _____
- ☐ Managerial Number of local employees: _____
- ☐ Other (please specify) _____

Q16) How much are the lodge's (local) employees paid (MYR/month)? (please circle)

- | | | | | | | |
|--------------------------|---------|---------|---------|---------|----------|-------|
| • Guides | 200-350 | 350-500 | 500-700 | 700-900 | 900-1500 | 1500+ |
| • Housekeeping | 200-350 | 350-500 | 500-700 | 700-900 | 900-1500 | 1500+ |
| • Cook | 200-350 | 350-500 | 500-700 | 700-900 | 900-1500 | 1500+ |
| • Kitchen staff | 200-350 | 350-500 | 500-700 | 700-900 | 900-1500 | 1500+ |
| • Waiter/Waitress | 200-350 | 350-500 | 500-700 | 700-900 | 900-1500 | 1500+ |
| • Boat operator | 200-350 | 350-500 | 500-700 | 700-900 | 900-1500 | 1500+ |
| • Maintenance | 200-350 | 350-500 | 500-700 | 700-900 | 900-1500 | 1500+ |
| • Gardener | 200-350 | 350-500 | 500-700 | 700-900 | 900-1500 | 1500+ |
| • Administration: | 200-350 | 350-500 | 500-700 | 700-900 | 900-1500 | 1500+ |
| • Managerial: | 200-350 | 350-500 | 500-700 | 700-900 | 900-1500 | 1500+ |
| • Other (please explain) | 200-350 | 350-500 | 500-700 | 700-900 | 900-1500 | 1500+ |

Q17) Do the lodge's employees receive other benefits by working at the lodge?

- ☐ Yes
- ☐ No (Go to Q19)

Q18) In what form are these other benefits?

Career Development

Q19) What incentives are offered to your employees to further their education/training? (please tick all those that are applicable)

- ☐ No incentives offered
- ☐ Higher salary to correspond with a higher education/training qualification
- ☐ Further promotions
- ☐ Education/training fees paid by the lodge
- ☐ Paid leave/flexible work hours to fit around study
- ☐ Provide mentors and tutors

Q20) Does the lodge offer job training for the employees?

- ☐ Yes
- ☐ No (Go to Q22)

Q21) In what form does this job training occur?

- ☐ English language
- ☐ External training courses
- ☐ Training 'on the job'
- ☐ Other (please specify)

Q22) Do the lodge's employees seem willing to further their education and/or training?

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

Q23) What are the main issues in regard to the training of locals?

Q24) The lodge is actively involved in educating its employees about the environment.

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree (Go to Q26)
- ☐ Strongly Disagree (Go to Q26)

Q25) In what form does environmental education take place at the lodge?

Q26) The lodge actively provides incentives for employees to practice more environmentally sustainable methods

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree (Go to Q28)
- ☐ Strongly Disagree (Go to Q28)

Q27) In what form does the lodge provide incentives for the employees to practice more environmentally sustainable methods?

Q28) Does the lodge provide English language training for its employees? (or another foreign language with which they can communicate with the tourists)

- ☐ Yes
- ☐ No

- Q29) All of the lodge's employees are encouraged to interact and talk with the customers
- ☐ Strongly agree
 - ☐ Agree
 - ☐ Disagree
 - ☐ Strongly Disagree

- Q30) The lodge's employees actively interact and talk with the customers
- ☐ Strongly agree
 - ☐ Agree
 - ☐ Disagree
 - ☐ Strongly Disagree

Q31) What are the main issues in regards to employee/customer interactions?

Employee Participation

- Q32) The local community were informed of and had the opportunity to participate in the lodges initial planning stages
- ☐ Strongly agree
 - ☐ Agree
 - ☐ Disagree
 - ☐ Strongly Disagree

- Q33) All employees have opportunities to participate in the lodges operations and future plans
- ☐ Strongly agree
 - ☐ Agree
 - ☐ Disagree
 - ☐ Strongly Disagree

Q34) What are the main issues involved in terms of local community and employee participation with the lodges planning, operations and plans?

Lodge Operations

- Q35) Does the lodge owner own the land on which the lodge is situated?
- ☐ Yes (Go to Q38)
 - ☐ No

- Q36) Does a local own the land on which the lodge is situated?
- ☐ Yes
 - ☐ No (Go to Q38)

Q37) How much rent is paid for the lease of the land, per month?

Q38) All of our goods and materials are locally sourced whenever possible

- ☐ Strongly agree
- ☐ Agree
- ☐ Neutral
- ☐ Disagree
- ☐ Strongly Disagree

Q39) Which goods and materials required by the lodge are sourced locally?

Q40) Which goods and materials required by the lodge are not able to be sourced locally?

Q41) Strategies are implemented to ensure minimal impact on the physical environment

- ☐ Strongly agree
- ☐ Agree
- ☐ Disagree (Go to Q43)
- ☐ Strongly Disagree (Go to Q43)

Q42) What are these strategies?

Q43) The lodge is actively involved with habitat restoration/nature conservation activities

- ☐ Strongly agree
- ☐ Agree
- ☐ Disagree
- ☐ Strongly Disagree

Q44) In what form does this occur?

Q45) How do you define 'ecotourism'?

Appendix 8 Sample of transcribed lodge interview

Me: Can you tell me in what year this lodge started?

L2: 1995.

Me: 1995. Actually how long have you been working here for?

L2: Myself for one year.

Me: One year, ok. And where did you work, in Sukau before that?

L2: Oh yeah I did. Well I've been in the industry for about fifteen years now. So I was actually with another company for about fourteen years. Then because of the difference in business ideology of this company that I had some kind of interest in – it's different than the rest, it's the one of its kind of ideology that...does eco-lodge. So I specifically came in this company to come to this lodge. To see how the eco-lodge ideology comes about and how it is run, and so far it is really different. It is not like any other business where they mainly focus on bottom-line, whether we make or we lose. Yeah of course business, we have to make money. But it is almost like secondary goal for the company. So primarily it is trying to be the best eco-lodge in terms of how it runs its company, how it runs its lodge, how it manages its waste and all that.

Me: Ok. So are you, instead of having the bottom-line approach, you have the triple bottom line approach I guess, like the...

L2: I think so, nowadays yah.

Me: ...social, and economic as well...

L2: Yeah, traditionally all of the other lodges are running the lodge as in, what I say bottom-line. It's just profit. So this company has, well, profit is not the main goal, so it's the running of the lodges and eco-lodge was primarily. So environmental awareness, partnership with the local community, awareness and all that. So now most of the lodges, if not all, probably have this in mind, all (mumble) triple-bottom line. So this company has an edge because it pioneered this ideology. Yeah it's good.

Me: Mmm, and by working here do you think its working?

L2: Umm...

Me: You said you came here because you had an interest in the ideology of the whole concept.

L2: Yeah I was. And it works here, as he, well, because of the staff and the management; they have that basic training, even when they start, when the lodge was started. The main goal is to help the local community, have as less impact, disturbance to nature as much as possible, and get the local community involved in the lodge operation. It's much easier here. I was working with another lodge, a bigger operation lodge, and all the good practise here is considered secondary on the other lodge. Yeah, so it's really different. Coming from a big company with, you own everything – your boats, and all that, and your staff, you can just employ your staff for any position outside of the local community, its common thing. In fact, well here, we don't own everything, actually we can, for example boats – we make sure that we have our own standard we are comfortable with, the type of boats that we own, that we design, and we ask the local people to make these boats for us. So this is one way to help the local community, and our number of boats is fixed. And if we have more than, uh more boats needed than what we have then we have to go to the local people and rent out from them. So this is one of those eco, eco-lodge ideology that I really like. And when I came here, coming from a bigger (mumble)... Hey why don't we construct fibreglass boats? In fact that was one of my first few recommendations. Fibreglass boat will last you ten years, fifteen years, and maintenance

very low, very cheap. While we have wooden boats that will last you one and half years at the most...

Me: Really?! Is that all? Wow...

L2: Yeah, cos it rots, yeah it's always on the river so... If we do that then we deplete the purpose of an eco-lodge. We are cutting off income for the local people. I said, uh ok, and then I said why don't we make twenty boats you know. And he said no again that depletes the purpose. So, coming from a big company with having all those points as a priority, like oh we must have our own boats, we must make it as long lasting as possible. So I was thinking to myself well I think that the company would change its mind eventually because this is really not business. But no I don't think so. It's a really (mumble) eco-lodge working there.

Me: Thanks for that. (laughing). Now we have the rest of the interview to do!

L2: Ok!

Me: But you have covered a lot of points though...

L2: Thank-you, yeah, yeah.

Me: How many guest nights did the lodge have last year?

L2: Oooh, last year... mmm, I don't know really. I can give you a rough estimation in a percentage... We only have twenty rooms. So for the whole year last year, give and take 75 per cent, 78 per cent.

Me; 78 per cent occupation rate?

L2: Yeah.

Me: Ok. And what are your busiest months? In terms of tourist numbers.

L2: This one.

Me: This one – which is July?

L2: July. It's probably 80 per cent on average. Yeah. It's quite high now actually.

Me: And what services does this lodge currently provide? You have accommodation obviously...

L2: Yes... (mumble), tourist transfers,

Me: Do you do jungle walks?

L2: Yeah we do.

Me: Yeah? Is that on private land?

L2: Well jungle walks that we go on our published itinerary will be on government land that is to the oxbow lakes, so it is part of the protected Wildlife Sanctuary. I think that all of the other lodges are doing the same thing.

Me: Yeah...

L2: And apart from that we also have our own private land which is part of the lodge. This lodge is on about seven acres of land, so about 20 per cent of that would be the lodge itself and the rest will be forest just behind us. And we have a boardwalk trail behind us. It's almost 1000 feet long, so about 300 plus metres, so it takes about half an hour, or 45 minutes slow walk around.

Me: Around the rest of the seven acres?

L2: Yip, yip.

Me: Oh, ok.

L2: It's a very nice walk, it's...

Me: Yeah... lots of leeches or...

L2: Well, when I said boardwalk it is really boardwalk. It is an elevated boardwalk. It is about one and a half metres wide, so...

Me: Oh ok...

L2: You don't really get leeches but if you want to be more adventurous you can go off the boardwalk, then yes...

Me: (laughing) then you will be covered in them!

L2: Yeah, definitely! (laughing)

(Chatting about leeches)

Me: How much do you charge for the services here? Accommodation and...

L2: Um... (he asks to go off tape about this)

Me: And you've already briefly touched on what the lodge's main reasons are for being involved in ecotourism and you said that economic profit is not number one. So which one of these would be number one? Would it be benefits to locals, or nature conservation? Or both?

L2: Both. Yeah. Ok... all this: provides benefits to locals, interest in wildlife nature conservation. Ok this is how I see it. It's difficult to explain. These three used to be almost non-existent in any business in as far as nature is concerned. Nature-based businesses like, if you still remember our logging era and so none of this is paramount. So, and then we have the palm oil plantations, so this is, yeah probably they think about it but they always just shove it under the carpet. This one is always paramount. And then tourism, we have to represent everyone. People are still sticking in their mind this one. Ok. Well in fact this should be primarily the reason, or would be part of your policy, your company's policy when you are in a nature-based business. But anyway, in the beginning it is this one. This is what I saw.

Me: In the beginning economic profit... ok...

L2: Yeah. From the beginning it's economic profit. So the reason why I transferred to this company was because I noticed this is not the main agenda. So I came here. When I came here, this is what I noticed, this paramount view. Of course this is very important. The lodge won't run if you don't have this in mind. So I would say, now, since the company has taken this up as the number one priority at the beginning of its operation, now it's time to reap the benefits financially. Because when it started off, of course you have to invest a lot of money and you have this as your priority. Now the tourism industry is getting better and better. It is time to reap what you sow. So I would say all four would be about, because this is not a challenge anymore. They are quite natural with it. So for example when we go to a meeting in KK. We go to KK once every two weeks.

Me: Really?

L2: Yeah I do, I have to. Yeah for meeting with the rest of the managers and the general manager, so whenever I come up with a proposal or if there is any small project or big project I have to inform them of course. And the first thing that the general Manager would ask me, what is the impact like to our surroundings; who is involved in this project? Are the local people taking full advantage of this? And last but not least he will ask me what is the cost of it. So it's really different. The company, the senior management, they are moulded differently. It is all about environment, the local people. Sometimes I get too excited with my proposal and think who cares? Lets get somebody from Sandakan if no-one knows how to. No no, we have to find in Sukau first, and then if you really can't find it then (mumble). So yeah, that's the difference in this eco-lodge ideology. So I would say that would come as an equal, uh to...

Me: Yeah, it kind of all has to balance within itself...

L2: Yeah...

Me: Ok... excellent. How many people does this lodge employ?

L2: 24.

Me: 24. All full-time?

L2: All full-time.

Me: Do you have any seasonal workers?

L2: We do, we'll employ seasonal workers, well daily-paid workers. Maybe two or three.

Me: Ok. And how many of your lodge's employees are local Sabahans?

L2: Local Sabahan... mmm... what do you mean?

Me: Ok. I have three questions here. One of them is how many of them are from Sabah. Like actually born in Sabah...

L2: Ok, born in Sabah. All I guess.

Me: Yeah? And how many are from the Lower Kinabatangan?

L2: More than half... let me see... about fourteen.

Me: Fourteen? Ok. And how many of these employees are originally from Sukau?

L2: All fourteen.

Me: All fourteen. Ok. Cool. And there is a statement here that locals are employed by the lodge whenever possible. Do you strongly agree, agree, disagree, strongly disagree?

L2: Strongly agree.

Me: Ok, and do you know the ages of the employees here? Just a rough age-bracket.

L2: What do you have there? So I have 20-25, I have a few of them. And I also have 26-39, I do also have 60 years plus.

Me: Really? How many 60 years plus?

L2: There you go, there is one walking by.

Me: Oh yeah?

L2: I think he is the only one.

Me: The only one! Wow, ok. So are the majority in-between 26-39?

L2: Exactly, yeah.

Me: How about 40-59?

L2: Probably just one as well.

Me: One? Ok, excellent. Do you know what the sex ratio is of the employees?

L2: There will be more males here.

Me: More males.

L2: Yes.

Me: So maybe about... what, twenty... no not that much... you have twenty-four employees...

L2: Yeah... so about... 18 males...

Me: Ok. And this is a question about the level of education of the local employees. From now on we are just going to talk about the people from the Kinabatangan.

L2: Oh ok. Just from this area yeah?

Me: Yeah.

L2: ok.

Me: So what level of education do these employees have?

L2: Most of them completed primary school, most of them... But some, very few, completed secondary school.

Me: Ooh wow. All the way up to the top...

L2: Yeah.

Me: Ok, excellent. And what roles do the local employees have here?

L2: We have guides...

Me: So we have fourteen local employees?

L2: Yip.

Me: Ok.

L2: Or you want me to break... because they are multi-tasking actually. Especially the guys.

Me: Maybe if you just tell me what roles they include.

L2: Ok. So all that is stated there. (laughing)

Me: Ok, that is alright. Ok, I will just tick them all!

L2: Yeah!

Me: Ok. Do you have a deputy manager here as well?

L2: No, I don't really. I have Jonathan as my acting deputy. But Jamil – the guy you met yesterday, whenever I am not here or Jonathan is also not here, then he will be acting as a Manager.

Me: Oh ok...

L2: In fact he is the highest ranking amongst the locals here. He's... well for example he's a guide, he's a maintenance man, and he can also act as a manager. So, yeah multi-tasking.

Me: Yeah... And he's local?

L2: He's local, yeah.

Me: Ok.

L2: He just lives next door actually.

Me: Local from Sukau... whereas you and Jonathan are not local?

L2: No.

Me: Ok. And how much are your employees paid per month?

L2: Ok...

Me: I have got some brackets here...

L2: The lowest... can I do that? Lowest and highest?

Me: Yeah, sure.

L2: Lowest would be 450 Ringgit.

Me: Ok.

L2: Highest would be 1,000.

Me: Really? So that's manager?

L2: Yeah, obviously you would know who (laughs).

Me: Ok.

L2: That's for the local yeah.

Me: So the majority are about 600 or something then...

L2: The majority would be on the lower bracket, because we have a very high turnover here of staff.

Me: Yeah?

L2: So, and most are young. When they come in they start young.

Me: Yeah?

L2: The only criteria for me whenever I do an interview with new staff is are you willing to work long hours, and can you work hard. I mean, here it is mainly physical. We hire them for a little bit of brainwork but a lot of physical work.

Me: On your feet the whole time...

L2: Yeah. So once they say yes, ok you're in. And it's quite difficult to get good workers also from the locals. Not in disrespect to them, most of the locals here they are not interested in staying in Sukau. Most would prefer to go to Sandakan, Kota Kinabalu. Well I can't really blame them; it's like working just in your backyard...

Me: Yeah... they want to go out and explore...

L2: Exactly, yeah. So, it's quite difficult sometimes. That's why we get the fresh school-leavers, so you know how fresh school-leavers (mumble). And they sometimes leave without notice. But not all are bad.

Me: (laughing)

L2: I have quite a few good staff working here.

Me: Yeah. You just have to... yeah... (laughing)

L2: So well, that's the price that you have to pay for being an eco-lodge. You have to fulfil your primary requirements before you, if you have really no other options then you can recruit people from Sandakan, or any other places.

Me: Do the employees receive any other benefits by working here?

L2: They do. If they take leave... although they stay and live here they can go with our boat back to Sandakan.

Me: Ok.

L2: Well it depends really. Because if there are not so many passengers that the boat is not overloaded, yes our staff can go. And also from Sandakan coming back here. Whereby, if you go by land, that'll cost you about 35 Ringgit, and when it's a really bad road out here, you know like a few months ago, it will cost you about 50 Ringgit from here, one-way. So that was really bad. Apart from the boats they can also... these are the benefits. After one year of confirmation we will give you medical benefits, if you are sick, well outpatient treatment of course. We have a (mumble) doctor, a private clinic that if you are sick you can get your medical chip from the office, go to Sandakan, and get yourself checked...

Me: Ok... that's good...

L2: Apart from that there are bonuses if the company makes money. You'll get bonus incentives on a monthly basis. Because we charge the drinks here apart from government charges for liquors and all that we (mumble) five per cent tax as service charge. And this service charge will be added up every three to four months and the accountant will send those five per cent charges like here, it will be divided amongst the staff.

Me: So it's kind of like a tip.

L2: Yeah. So far this is the only place that does this.

Me: Ok. And are any incentives offered to the employees to further their education or training while they are working here?

L2: Well we encourage for the guides especially, like nature-based guides...or, not just guides - any of the staff in whichever department you're in. You come here for the purpose of being a housekeeper or waitress, but you can communicate in English. Because primarily it's (mumble) to have English language. So we have discovered a few during the many years in this lodge, they do something else but they can communicate with guests, they show interests for being a guide. For these kind of staff we will send them for tourist-guide licences. I would say that there are also educational incentives. We send them off for the courses. It costs a lot of money normally. And you have to send them for about one week, maybe one month, and then they will take the exam and all that and then come back. Well there is always no guarantee that they will go through the exam or not. But (mumble) incentives. So if it's always open to anybody at the lodge. So apart from that, so far we have not really touched onto other things in terms of education.

Me: And if someone goes through a training course, say a month-long training course and they pass the exam would they then be given a promotion or salary-rise?

L2: Oh definitely.

Me: Yeah? Ok.

L2: The company is really into this self-development. If we see a very significant change in one individual - no matter in which department you are - you are a guide, a driver, a boatman, a manager, if there is any significant change in your behaviour, in your reporting and all that, yes definitely. So far here in this lodge, as the man in charge, I haven't really emphasised on the education, self-development... not yet, because I'm still going through the process myself. I go to KK. One of the reasons we go there once every two weeks is that we get motivational talks from the owner himself. We go to his house once every two weeks in the evening for two hours. We learn about leadership, we learn about teaching people and all that. So it's very good. Now my only challenge here is to

share this with the other staff. But as I said my challenge is, it's sometimes difficult when you go through a higher level of learning and, it's all in English and all that. Then coming back here.... So I'm trying to break the codes of how to do this here. Because it's such a good learning process for me. And most of them know about the lodge ideology and all that, but there are other things that they need to know.

Me: And there is also a matter of knowing it and then also practising it as well...

L2: Exactly. Yeah so that's good.

Me: Mmm interesting. Does the lodge offer job training for the employees? Like before they are offered a job? Or is it just more on the job training?

L2: It's on the job training, yes.

Me: And you've already mentioned that you provide external training courses, to further training...

L2: External... Yeah like tourist guide courses... ok.

Me: And the English language, that is kind of on-the-job...

L2: On-the-job, yeah. Well we get a lot of volunteers from outside of Malaysia working in (name of company). So there was this one lady who was very interested to come here to do volunteering work, and one of the jobs that she did here was teaching English. So we do have it occasionally. So I would like to have it more on a constant basis. One goes off and another comes in. Because the interest of the staff is very high when it all first started, but when she left and then they were asking (mumble). I mean I can speak a bit of English right, but it doesn't qualify me to teach, especially the subject of English, you know.

(Interview interruption).

Me: Do the lodge's local employees seem willing to further their education and training? ... Or would you have problems, like you've got to push them...

L2: Push them, yeah. That's... yeah that will be the answer – push them.

(Interview interruption).

Me: Ok... so yeah you just need to push them and encourage them...

L2: Yeah. It's (mumble) or see the local mentality. It's... to say that they are lazy is wrong... it's...

Me: A different way...

L2: Oh it is! I mean I think long time ago everything comes easily and freely to them. You get your fishes, you get your vegetables, you get your meat, all from here. And when you want them you go and get it. If you don't want it then relax at home. So that is not lazy mentality actually, that's like, if you ask me, it's a real good balance with nature. They spend their 24 hours wisely. But of course you can't do that today, because things have changed. But the mentality is still there. So... when you have a task for them to do they will complete it, 100 per cent they will do it. And then when the task is finished, hmmm, they will wait for another task. So, that's why I say we push them. And of course all the motivational and self-motivational and training will help them if I can share it with them. Cos they will teach about (mumble) of life, instead of just like, seeing things (mumble). But yeah we push them. We push them along yeah.

Me: Ok (Then we chat about local people). Is the lodge actively involved in educating its employees about the environment?

L2: Oh yes we do. Yah. It's funny though because there's no policy on it. There's no written policy. It's all on, what should I call it... common-sense basis? Like hey what are you doing? Don't burn that, it's bad for the environment. There's no written policy. Well we do have policy of the environment but there's no such thing as ah don't smoke here, and don't throw your cigarette butt. One of those ways for us to educate them is we have recycling bins, that we try to impose. The people who use those effectively are the guests

who come here. I didn't expect so much from the staff. Because they would just open whichever is nearest and throw whatever to the nearest ones.

Me: Because that is what they are used to doing...

L2: Yes. So, the guests do it, and then I will show them, look at this man, you know, he is throwing his tin can in the tin can bin. This is how it is supposed to be. And then whenever I have the people in charge of cleaning the bins, cleaning it, I ask them to open it and see what is wrong with it. I mean this is my way of giving education. Ok there's a tin can here. Where is the tin can supposed to go? Oh it's supposed to be here! They know it! They know where it should go exactly.

Me: And then they have to fix it and everything, so yeah...

L2: Yes, so it can be very engrained in their minds. Boats for example. When we go out cruising, if they get too close to the animals, I say come back, you know. Because you go there and get too close to the animals then the animals will run away and everyone ends up seeing nothing. So, it's a classic example....

Me: Yeah, just using your own common sense, and...

L2: Yeah, it's all basically common sense.

Me: Ok. And do you provide incentives for the employees to actually use their common sense and to...

L2: Yeah we do. Every year we have two major gatherings. One will be media gathering. This will be not only for this lodges staff but also for (name of company) in Sandakan and Kota Kinabalu. Media gathering will always be here. And then we have year-end gathering, so that's a bigger one. So during the year-end gathering, we will nominate our staff, people who can take care of engines, who take care of lodge data, or any property data, who will present herself or himself the best during servicing the guests and all that. So we give incentive for all this.

Me: Oh ok. So they get presented with a certificate or...

L2: Yeah, we come up with a certificate, or to go along with it we have shirts, drinking water, or anything. It's like a gift and all that, a hamper, so yeah they really like it.

Me: Are your employees encouraged to interact and talk with customers?

L2: Oh yeah, always, yes.

Me: And does this actually occur?

L2: Oh yes it does. In fact, we, well because the lodge is about 12 years now, fifteen probably, if you include the days of making the foundation, if it's anything we have good comments are on the staff. Always. We are very strong in that point that the staff, ok helpful, friendly, helpful friendly... what else? Yeah but it's always the staff that...

Me: In the comments book?

L2: Yeah.

Me: That's good.

L2: Yeah exactly. I think the attraction of any lodge; of course the proboscis, the elephants, whatever, but they spend most of their time in the lodge. Not just two hours here, but about 80 per cent of their time. So no matter how good or how bad your lodge is, it is still the people. I think they are part of the attraction. The guests come here from whatever country and then they get to see the local staff interacting with them. So we score quite highly on this. And I always emphasis the smile. You may not be able to communicate (mumble), but you know we learn that 70 per cent of communication is not speaking...

Me: Just smile and say yes!

L2: (laughs) Yeah well our staff is actually our biggest asset.

Me: Are there any issues in regard to the interactions with customers? Like is the staff at first shy, or...

L2: Oh yeah, always.

Me: Ok. But they just grow in confidence...

L2: Yeah.

Me: Ok. When the lodge was initially starting, was this back in 1992?

L2: 95.

Me: 95, ok. Was the local community in Sukau informed of the plans for the lodge?

L2: Oh yeah they were. In fact when the lodge was formed, before the lodge was formed, the land was purchased from a local. So... the whole, well not the whole community, the whole chain of families were against it, selling the land off to an outsider. But (name of owner) assured the landlord by building this as an eco-lodge, and this is how an eco-lodge will (mumble). So the entire family for the next few generations will be well taken care of by working here, they can get contracts here, for example building materials, boat-making opportunities. We buy your river produce... I don't know if you have seen the freshwater prawn or crayfish? So we buy those and serve them to guests, and buy those from the locals, fish and all that. So, he also agreed and informed the rest of the family members. The family members didn't like the idea. They like the idea of a lodge here but not the idea of selling off the land. So eventually (name of owner) managed to persuade him to sell off his land, and the owner was almost out-casted by the whole family.

Me: Really?!

L2: Yeah. Because it's something unheard of, selling off your heirloom in fact. And it took many years for this lodge to prove itself. Getting the land off from the owner, if you're a heartless businessman, ah I got what I wanted I don't care about you anymore. But it took the lodge a few years to show the family members that this is going to be beneficial for everybody.

Me: Are those family members now involved in the lodge?

L2: Oh yah. Almost everyday. Yeah almost everyday. Directly we employ about... 30 per cent of those who are local here, 30 per cent are direct relatives of the landowner. Now those are attached to us on our payroll. And on a daily basis about, oh... I can say about 50 per cent of the boats that we hire are of the relatives of the landowner, direct relatives. I'm not saying what 10th cousin or 20th cousin, these are really like his grandchildren, or his own children. So... now people don't say anything. Otherwise if the lodge, if he didn't sell off and (name of owner) doesn't want his land, he wouldn't have invested in this land. But then he did, so... it works out for both the lodge, the local community. And one thing I am amazed is that (name of owner) still has some kind of attachment to the local people. And whenever I go to KK we talk about the problems here, and he will mention them by names. He knows them all. Is Awang having a problem? Ok, tell him that I say so. And he didn't just become a successful man (mumble). But he knows them by name, and he knows them by character – oh it's ok, he'll be angry for 2-3 days... yeah it's good.

Me: Does (name of owner) come here very often?

L2: Nowadays not any more. Maybe three, four times in a year. But the general manager, he comes here about once every two months he'll be here, so... he takes charge of any issues that can not be solved locally. There used to be a lot of problems in the lodge, but not anymore.

Me: Ok. Do the employees here have opportunity to participate in the lodge's future plans?

L2: Yeah. I mean, sometimes you just need to stay put in one location for quite sometime then you can see benefits. We do have plans to have ten more units of this lodge. This means that we are going to expand. Because it is the calling of business that we are getting in fact more complaints than compliments by staying with only twenty rooms.

Me: Oh ok. You are going to add another whole wing?

L2: We'll add another ten rooms inside, just behind here.

(Interview interrupted)

Me: What are the main issues involved in terms of the participation of the locals and employees with the lodges planning, operations and plans? (Laughing) Bit of a complex question!

L2: What are the main issues?

Me: Are they interested in you know thinking about the future of the lodge, or they just go oh yeah...

L2: Well this lodge, the staff are all, they've gone through a lot of community projects... environmental projects. They've gone through a lot. They are quite used to this. And nothing surprises them anymore. For example a few years ago we had this community service, whereby they invited doctors from Kota Kinabalu, Korea if I'm not mistaken, West Malaysia, they have the doctors here. All in different fields. Some are dentists... but they come here, give them free tours, free accommodation, free meals, and then they will set up a date everyone goes to the main village, and at the same time our staff will go on to the villages further than this village to tell them there are doctors who have come here and will treat them for free. So on that set date, everybody will come in – the doctors and the patients. So this is one of the community services that this lodge has organised. And we also organise water-tank projects such as the staff will go out and survey the village. See how many don't have water tanks to harvest rainwater. Because they collect the river water and boil it and drink it. So it's not as good, or... in another word rainwater would be better to boil. It's clearer. So they do a survey, and then rotary will donate water tanks, other individuals will donate water tanks to us, and then we will distribute these to the local people. These are for the communities. And for the environment, we are doing also our own tree-planting project which we integrate with our tours. So off they go to the oxbow lakes, plant a seedling and hopefully (mumble) will come up. So the staff are well informed of this. If there is any project, it's quite amazing because they don't (mumble) literally, it's not just theory for them, they've done it really. So when we have a new project coming up the staff will come and tell us oh I suggest we do this, I suggest we do this... So, yeah. They're quite proactive in that. No problem. There is no real issue. Except for new staff and then they won't really understand what's going on.

Me: Oh that's really good. Ok. And do you agree with the statement that your goods and materials are locally sourced whenever possible?

L2: Whenever possible, yes.

Me: Ok. And which goods and materials are sourced locally? Like are able to be sourced locally?

L2: Wood products... now this can be misconstrued. I always make sure, because if you look at what you can see now is all timber and all that. So this is a very sensitive issue. I always make sure from my suppliers because I know each individual who supplies me wood which type of timber I require. The requirement of the lodge is obviously most of the timber exposed will be Bornean hardwood; this should be the hardest wood that can resist the element for many years. And then of course with the inside we can be a little bit more tolerant, we can have softwood or medium hardwood. So I always make sure I always know what type of wood because I know where, which area he will cut this wood, or timber from. So the areas that our suppliers collect their timber material is not in the forest reserve, is not in the wildlife reserve, it is always in a granted land. Granted land means the land belongs to somebody.

Me: Ah, private land.

L2: Private land. So, it's up to you to negotiate how much you want to buy those trees. And, well, this is the control that we, or the discipline that we have to enforce on ourselves.

We have to make sure that this is abided by. Otherwise forestry has their own office here. Wildlife department have their own office. HUTAN, or Red Ape Encounters also have their office and they are also quite active in controlling this area for people breaching the forest and all that. So I don't want to get caught one day. My timber materials come from protected forests. Because I will be in hot soup. So I always make sure I know where you take your timber from. Some of those resources, also from our own land, there are a lot of trees that.... Now on our own land I always make sure that we get our trees or materials from fallen trees, or there are sometimes trees which are still good and healthy but it is a threat to the lodge in whatever ways, we have to...

Me: cut it down...

L2: Yeah, so we have to cut it then... instead of letting it rot...

Me: You use the wood.

L2: Yeah, cut the wood. Yip so, others would be like boats. Now we, our first tour boat – the green colour, maybe you saw them down there?

Me: Yes.

L2: The green colour ones...that was Sukau One. Now we are coming up to Sukau 25. We are going to have two more, so Sukau 26 and 27. And these boats are not cheap you know. It's an average of 2,300 Ringgit per piece...

Me: 2,300...

L2: 2,300, yeah that is the price we are paying for it now. It used to be cheaper but...

Me: And you get locals to make them and you use local wood...

L2: Yes. We have three boat builders for this since the beginning of the lodge. It's always these three. Three different families. But one has been taking the contract, 60 per cent of the boats came from this one particular guy. Because one reason is he's closer to us, and...

Me: And they know what specifications you...

L2: Oh yeah, measurements and all that. What type of wood, for the hull, for the sides and all that, so, yeah...25, coming onto 27, that's a lot of boats.

Me: And also you get chickens locally, or...

L2: Chicken? Not chicken. No. We have to get it from Sandakan.

Me: Yeah that's funny, because so much chicken is eaten in the lodges.

L2: Yeah! ... It's a good idea to start chicken farming here...

Me: But I guess there is so much demand for chicken by the lodges, maybe the locals can't provide...

L2: Cos they aren't really... they don't rear animals that much. These are mainly hunters and...

Me: Yeah and the animals are just for their own consumption.

L2: Exactly yeah.

Me: Which goods and materials, apart from chicken (laughs), that's required by the lodge, are not able to be source locally?

L2: Fish, vegetables...

Me: You get this from Sandakan?

L2: Yeah. Well on, I wouldn't say 100 per cent, maybe a fraction of percentage we will get it from here on seasonal basis.

Me: So what about fruit?

L2: Also it will come from Sandakan. On occasion we buy here, again due to seasonal reasons. Because most of our fruit is seasonal.

Me: Ok. And you've already talked about that you implement strategies to ensure minimal impacts on the environment. What strategies do you have? You have the recycling bins, and...

L2: We have recycling bins, and all of our waste goes to Sandakan. We don't manage it here; well we do manage it to be transported to Sandakan. The only waste that we throw in the river would be food wastes. So that will be eaten by the fishes and water monitor. But the rest will go back. Old batteries, we always make sure that we keep it, we don't throw it anywhere. Used motor-oil, we, when we change the motor-oil in our engine, our 15 horsepower engine, or on our generator, we always make sure we put it in tanks and send it out to Sandakan. Because we sell it also. Yeah it's being used in workshops. I think they recycle motor-oil as well, I don't know how they do it but they do that. So yeah, that's how we manage it.

(Chatting about waste management in Sandakan)

Me: This question is about habitat restoration and nature conservation. You have already mentioned that the lodge is involved with tree planting around the oxbow lake. Is there anything else that you are involved in?

L2: Some years ago we had this oxbow lake clearing project. We tried to save an oxbow lake. You know what is an oxbow lake yeah?

Me: Yeah.

L2: Ok, so, there is this one lake near to the lake that is attached to the main river, and the other lake is totally detached. So it used to be a very beautiful looking lake, crystal-clear water, you see Kingfishers, hawks and all that fishing in that lake. Then one day accidentally these introduced plants, those that invade very quickly, went in there and discovered the whole lake in a matter of weeks.

Me: Wow!

L2: So, it was a very beautiful lake and these plants are not native to Borneo. So we can try to do something about it. Because obviously.... Yeah not so balanced. So we got some volunteers from England, gave them space to sleep and also free food and clear it manually. We tried to... so they did clear an area for about, I might exaggerate it, maybe 10 by 10 metres, yeah, 10 metres by 10 metres. But in just about two or three days it was all covered again.

Me: Oh, that's so frustrating!

L2: Yeah so we stop it. Mmm, so if that's the case then let's just let nature take its course. But the problem with this is that they are not native, so who is the natural enemy?

Me: Do you know how they were introduced? Maybe on boats or something?

L2: Maybe, I don't know. But... well we've heard stories, it's like gossiping! Because it's so nice, and a lot of people did documentaries. Well documentaries on other subjects, not particularly the lake but say Kingfisher hunting. Access is very easy and the shade, if you want shade you have shade, if you want open area you have open area, if you want your boat in, you can easily do that. So it's very easy. So to beautify, this is what we heard, to beautify the filming activity they introduced those tiny leaves looking plants that float. And these are native to South America, it's not native here. So they put it there just to beautify. And that plant really can grow. Very fast, very fast.

Me: Wow... is that the problem plant now, or?

L2: Yeah.

Me: Oh my goodness...

L2: Well now it's not a problem anymore. I think it is integrated... it is now a different kind of landscape. The water is drying up, well maybe there is still water because it is quite a big lake, but yeah it was such a beautiful lake. I was lucky too, because last time I was a tourist guide so I managed to see this and, and when it was gone like... people come there and new guides and other guests, say oh this is beautiful. And yeah well in a way, it is a different landscape. It's not a lake anymore, it's grass growing. So yeah eventually it will bring some good. Hopefully.

(Chatting)

Me: So just one final question. How would you define ecotourism?

L2: How do I define ecotourism? Difficult! That's my definition of.... It's difficult, but it can work. Wow, where should I start? From the government down. The government has to be aware of this as well. It seems to me that NGOs are more aware of this than government. Ourselves, we are not in the process of learning and knowing ecotourism, or eco-lodge – this is applicable to us. We are in the process of defining, well refining sorry, refining the practices and trying... nowadays in this computer age, you get new things almost on a daily basis. So it is up to you to select which is applicable to your location and which is not. Of course there are so many good ideas, great ideas in fact out there, but probably not all are applicable. And ecotourism is also all about education. Educate the younger generation on what's the environment, the wildlife, local community, also to educate the local community. Yeah it's, like I said it is difficult....

Me: Yeah, it's complex...

L2: Yeah, it's a lot of people, a lot of partnerships need to be...when you say partnership you have all kinds of quarters or groups. Each with its own primary agenda. So we have our own agenda, we are in the tourism business, that is our agenda. But we have these guidelines that we have to follow. We are an ecotourism company; we have an eco-lodge. So, like I said it's difficult. It's easy to say but quite difficult. But I'm not saying it's impossible – it is possible. But we stick on to the very basics of being eco-lodge, for example that we share with guests. Come into the lodge; take off your slipper – why? Why? Well one of the criteria of an eco-lodge is to follow the local communities, uh...

Me: Etiquette

L2: Yeah, etiquette. So this is one of them. So you are being eco-friendly by taking off your shoes. We have this sarong that we put on at night, during dinner time. They say – why? Well we want to share with you the local lifestyle, traditions and all that, so that is also again as an eco-lodge one of the criteria. So we share it in small basic ways with the guests, whether they realise it or not, but yeah that is how it is.

Me: That's interesting, because a lot of people with ecotourism they overlook the whole local community and culture... ecotourism – oh nature.

L2: Yeah! Actually, that's what I used to think, but eco-lodge focused on nature, but it's not just the nature...We have to consider those that enjoy the ecotourism as well because they come here and pay. Ecotourism will not work if there is no such income generated, so we have to look at it from their point of view as well. Probably not the main focus, but you have to consider them.

Me; Yeah. They are part of the whole equation as well. Though yeah definitely, partnership... Would you have any other comments that you would like to add? Or do you feel a bit talked out?!

L2: Yah! I'm tired! It's time to get my break!

(chatting then END OF INTERVIEW).

Appendix 9 ‘Not Involved’ in tourism interview

- Introductory Questions

English

Q1) How long have you/your family lived in Sukau?

Q2) What were your thoughts about tourism when it first started in Sukau?

Q2a) What are your thoughts now?

Q3) Would you like to be involved with tourism in your village?

Yes

No

Q3a) What are the issues regarding your involvement?

- Soalan-soalan Pembuka

Malay

Q1) Sudah berapa lama keluarga kamu tinggal di Sukau?

Q2) Apa fikiran/pendapat kamu tentang pelancongan semasa ia dimulakan di Sukau?

Q2a) Apa fikiran/pendapat kamu sekarang?

Q3) Adakah kamu ingin terlibat dalam pelancongan?

Yah

Tak

Q3a) Apa masalah masalah tentang penlibatan?

Q3b) Would training and development help enhance your involvement in tourism?

Q3b) Bolehkah latihan dan pembangunan menolong kamu berlibat dalam pelancongan?

(If yes, continue to Q3c) (If no, go to Q4)

(Jika yah, pergi ke Q3c) (Jika tak, pergi ke Q4)

Q3c) How do you hope to get involved?

Q3c) Bagaimana kamu akan terlibat dalam pelancongan?

Impacts of Tourism

- Economic impacts

Q4) Is tourism important towards generating income?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

Q5) Do you think that tourism benefits your community sufficiently?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

Kesan-kesan Pelancongan

- Kesan-kesan ekonomi

Q4) Adakah industri pelancongan penting untuk menambah pendapatan?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua-duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen:

Q5) Adakah pelancongan menguntungkan secukupnya penduduk kampung kamu?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua-duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen:

Q6) Who do you think has benefited the most from tourism? (Choose 5 cards & rate)

- ◇ Lodge owners
- ◇ Homestay operators
- ◇ Boatmen
- ◇ Young people
- ◇ Tourism employees
- ◇ Market workers
- ◇ Shop owners
- ◇ Conservation workers
- ◇ Fishermen
- ◇ Landowners
- ◇ Transport providers
- ◇ Other _____
- ◇ Other _____
- ◇ Other _____

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Q6) Kumpulan mana yang untung lebih dari pelancongan? (Pilih 5 kad dan susun)

- ◇ Pemilik lodge
- ◇ Homestay
- ◇ Tukang bot
- ◇ Belia
- ◇ Pekerjaan pelancongan
- ◇ Pekerjaan pasar
- ◇ Pemilik kedai
- ◇ Pekerjaan konservasi
- ◇ Nelayan
- ◇ Pemilik tanah
- ◇ Pemilik bas dan kereta sewa
- ◇ Lain-lain _____
- ◇ Lain-lain _____
- ◇ Lain-lain _____

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-Environmental impacts

Q7) Has the environment changed since the arrival of tourism?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

- forests, river, wildlife, plantations

Q8) Has the arrival of tourism increased your environmental awareness?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree

-Kesan-kesan alam sekitar

Q7) Adakah alam sekitar berubah semanjak pelancongan di mulahkan?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen:

- Hutan, sungai, hidupan liar, lading sawit

Q8) Adakah kedatangan pelancongan meningkatkan kesedaran alam sekitar kamu?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua duanya
- ◇ Tidak setuju

◇ Strongly disagree

Comments:

Q9) Has tourism given you the incentive to protect the environment?

◇ Strongly agree
 ◇ Agree
 ◇ Neither agree or disagree
 ◇ Disagree
 ◇ Strongly disagree

Comments:

Q10) What are your thoughts about the conflicts between the wildlife and village life?

- **Other impacts
(Socio-cultural impacts)**

Q11) Have there been changes in the local culture since the arrival of tourism?

◇ Strongly agree
 ◇ Agree
 ◇ Neither agree or disagree
 ◇ Disagree
 ◇ Strongly disagree

Comments:

Q12) Have there been changes in traditional values since the arrival of tourism?

◇ Strongly agree
 ◇ Agree
 ◇ Neither agree or disagree
 ◇ Disagree
 ◇ Strongly disagree

Comments:

◇ Amat tidak setuju

Komen-komen:

Q9) Adakah pelancongan memberi kamu insentif untuk memulihara alam sekitar?

◇ Amat setuju
 ◇ Setuju
 ◇ Kedua duanya
 ◇ Tidak setuju
 ◇ Amat tidak setuju

Komen-komen:

Q10) Apa fikiran/pendapat kamu tentang konflik-konflik antara hidupan liar dan penduduk kampung?

- **Kesan-kesan lain
(Kesan-kesan sosio- budaya)**

Q11) Adakah budaya di kampung ini berubah selepas ketibaan pelancongan?

◇ Amat setuju
 ◇ Setuju
 ◇ Kedua duanya
 ◇ Tidak setuju
 ◇ Amat tidak setuju

Komen-komen:

Q12) Adakah tradisi dan amalan di kampung ini berubah selepas ketibaan pelancongan?

◇ Amat setuju
 ◇ Setuju
 ◇ Kedua duanya
 ◇ Tidak setuju
 ◇ Amat tidak setuju

Komen-komen:

Q13) Have there been changes in the behaviour of young people since the arrival of tourism?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

Q13) Adakah gaya dan perangai belia di kampung ini berubah selepas ketibaan pelancongan?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua-duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen:

(Training & Development)

Q14) Which groups have benefited the most from training and development

(Rating question – use cards)

1. Homestay operators
2. Boatmen
3. Young people
4. Tourism employees
5. Conservation workers
6. Transport providers
7. Other: _____

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(Latihan dan Pembangunan)

Q14) Kumpulan mana yang lebih untung dari latihan dan pembangunan? (Susun dari satu ke sepuluh – beri kad-kad untuk bersusun)

1. Homestay
2. Tukang bot
3. Belia
4. Pekerjaan pelancongan
5. Pekerjaan konservasi
6. Pemilik bas dan kereta sewa
7. Lain-lain: _____

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(Infrastructure)

Q15) How has the infrastructure changed with the development of tourism?

- Communication (roads and

(Infrastruktur)

Q15) Bagaimanakah infrastruktur di kampung kamu berubah semanjak kemajuan industri pelancongan?

<p><i>communications)</i></p> <ul style="list-style-type: none"> - <i>Sanitation (water supply)</i> - <i>Healthcare facilities</i> - <i>Schools</i> <p>Q16) What infrastructure in your village needs to be improved?</p>	<ul style="list-style-type: none"> - <i>Jalan raya dan telekomunikasi</i> - <i>Bekal air</i> - <i>Kesihatan – hospital, klinik</i> - <i>Sekolah-sekolah</i> <p>Q16) Infrastruktur apa yang perlu dimajukan di kampung kamu sekarang?</p>
<p>- The Future of Tourism</p> <p>Q17) How do you think that tourism in your village can be improved?</p> <ul style="list-style-type: none"> - <i>More jobs?</i> - <i>Attract more tourists?</i> - <i>Decrease level of tourism?</i> - <i>More language training?</i> 	<p>-Masa Depan Pelancongan</p> <p>Q17) Bagaimana pelancongan di kampung kamu boleh dimajukan?</p> <ul style="list-style-type: none"> - <i>Peluang pekerjaan</i> - <i>Tambahkan pelancong</i> - <i>Kurangkan pelancong pelawat</i> - <i>Latihan bahasa</i>
<p>- Future Alternatives</p> <p>Q18) Do you have plans for other sources of income in the future?</p> <p>Q19) Can you recommend any other projects for your village to pursue in the future?</p> <ul style="list-style-type: none"> - <i>in terms of earning money/ conserving wildlife?</i> - <i>More job opportunities</i> <p>Any other comments?</p>	<p>Pendapatan Alternif Masa Depan</p> <p>Q18) Adakah kamu mempunyai cara-cara lain untuk menambah pendapatan di masa depan?</p> <p>Q19) Adakah kamu idea-idea untuk projek-projek lain di kampung kamu di masa depan?</p> <ul style="list-style-type: none"> - <i>Projek yang menguntungkan</i> - <i>Projek konservasi binatang liar</i> <p>Komen-komen lain:</p>

End of Interview - Tamat

Appendix 10 ‘Involved’ in tourism interview

- Introductory Questions

English

Q1) How long have you/your family lived in Sukau?

Q2) What were your thoughts about tourism when it first started in Sukau?

Q2a) What are your thoughts now?

Q3) When are your busiest tourist months?

Note:

If no-one else in the household is involved in tourism other than homestay, go to Q6. Otherwise proceed and direct Q3 to the members of the household who are involved in tourism.

If Involved in Tourism

Q4) Is tourism your main income?

Y

N

Q4a) What percentage of your income is from tourism?

Q4b) What is your yearly tourism income?

Q4c) What other forms of income do you engage in?

Q5) Would you be interested in a career in tourism in the future?

Y (go to Q5a)

N (go to Q5b)

Q5a) (If yes) How will you achieve this?

- Soalan-soalan Pembuka

Malay

Q1) Sudah berapa lama keluarga kamu tinggal di Sukau?

Q2) Apa fikiran/pendapat kamu tentang pelancongan semasa ia dimulakan di Sukau?

Q2a) Apa fikiran/pendapat kamu sekarang?

Q3) Bulan apa kamu menerima paling ramai pelancong?

Jika terlibat dalam Pelancongan

Q4) Adakah pelancongan sumber pendapatan utama kamu?

Yah

Tak

Q4a) Apa peratusan pendapatan kamu dari pelancongan?

Q4b) Lebih kurang berapa pendapatan kamu dari pelancongan di dalam satu tahun?

Q4c) Apa sumber pendapatan kamu yang lain?

Q5) Adakah kamu berminat berkerjaya dalam pelancongan di masa depan?

Yah (ke Q5a)

Tak (ke Q5a)

Q5a) (Jika yah) Bagaimana kamu akan memajukan pekerjaan ini?

Q5b) (If no) Why?

Q5b) (Jika tak) Kenapa?

If involved in homestay

(If not go to Q23 – Tourism impacts section)(Jika terlibat dalam program homestay (Kalau tidak pergi ke Q23 – Seksyen kesan-kesan pelancongan))

☐ Registered (I) ☐ Registered but under application (II)

☐ Receiving guests (A) ☐ Not receiving guests yet (B) ☐ Was receiving guests (C)

Combination: _____

Note combination of responses above and go to correct section below

If **(IIB)** ‘Registered but under application’ and ‘Not receiving guests yet’ – go to Q6
Q6) When did you register?

Q6) Bila kamu mendaftarkan homestay ini?

Q7) When will you start receiving guests?

Q7) Bila kamu akan menerima tetamu?

Q8) Are you being provided with any training and assistance? (eg English language)

Q8) Adakah kamu mendapat latihan tentang mengurus homestay? (seperti bahasa inggeris)

Q9) What are your thoughts about getting involved in the homestay?

Q9) Apa fikiran/pendapat kamu tentang terlibat dalam homestay?

Go to Q23 page 6 - Tourism impacts section

If **(IC or IIC)** ‘Registered’ or ‘Registered but under application’ and ‘Was receiving guests’ – go to Q10 below

Q10) When did you register?

Q10) Bila kamu mendaftarkan homestay ini?

Q11) When did you start receiving guests?

Q11) Bila kamu bermula menerima tetamu?

Q12) When did you stop receiving guests?

Q12) Bila kamu berhenti menerima tetamu?

Q13) Why are you not receiving guests now?

Q14) Do you plan to receive guests again in the future?

☐ Y ☐ N

Comments:

Q13) Kenapa kamu tidak menerima tamu sekarang?

Q14) Adakah kamu akan menerima tamu lagi di masa hadapan?

☐ Yah ☐ Tak

Komen-komen:

Go to Q17

If **(IA or IIA)** 'Registered' or 'Registered but under application' and 'Receiving guests' – go to Q15

Q15) When did you register?

Q16) When did you start receiving guests?

Q17) How many guests can you accommodate per night?

Q18) How many guest nights did you have last year (2006)?

Q19) How many months did you receive guests in 2006?

Q20) Under which circumstances do you not receive guests? (Prompt)

Q21) What were the main issues when first starting your home-stay?

Q21a) Were you provided any training/assistance? (English language etc)

Q22) What are the main obstacles you face in the management of the homestay

Q15) Bila kamu mendaftarkan homestay ini?

Q16) Bila kamu bermula menerima tamu?

Q17) Berapa tamu kamu boleh terima semalam?

Q18) Lebih kurang berapa malam kamu ada tamu di dalam tahun 2006?

Q19) Lebih kurang berapa bulan kamu ada menerima tamu di 2006?

Q20) Apa sebab-sebab kamu tidak menerima tamu?

Q21) Apa masalah masalah ketika kamu mulakan homestay?

Q21a) Adakah kamu mendapat latihan tentang mengurus homestay?(Seperti Bahasa Inggeris dan lain lain)

Q22) Apa masalah masalah kamu tentang pengurusan homestay sekarang?

business?

- *Visitor numbers too high/too low*
- *Marketing/advertising*
- *Language/communication problems with tourists*

- *Bilangan pelancong (terlampau sedikit/terlampau banyak)*
- *Pemasaran/promosi*
- *Masalah dan perhubungan dengan pelancong*

Impacts of Tourism

- Economic impacts

Q23) Is tourism important towards generating income?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

Q24) Do you think that tourism benefits you sufficiently?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

Q25) Do you think that tourism benefits your community sufficiently?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

Q26) Who do you think has benefited the

Kesan-kesan Pelancongan

- Kesan-kesan ekonomi

Q23) Adakah industri pelancongan penting untuk menambah pendapatan kamu?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua-duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen:

Q24) Adakah pelancongan menguntungkan kamu secukupnya?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua-duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen:

Q25) Adakah pelancongan menguntungkan secukupnya penduduk kampung kamu?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua-duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen:

Q26) Kumpulan mana yang untung lebih

most from tourism? (*Pick 5 cards & rate*)

1. Lodge owners
2. Homestay operators
3. Boatmen
4. Young people
5. Tourism employees
6. Market workers
7. Shop owners
8. Conservation workers
9. Fishermen
10. Landowners
11. Transport providers
12. Other: _____

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- **Environmental impacts**

Q27) Has the environment changed since the arrival of tourism?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

- *forests, river, wildlife, plantations*

Q28) Has the arrival of tourism increased your environmental awareness?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

dari pelancongan? (*Pilih 5 kad dan susun*)

1. Pemilik lodge
2. Homestay
3. Tukang bot
4. Belia
5. Pekerjaan pelancongan
6. Pekerjaan pasar
7. Pemilik kedai
8. Pekerjaan konservasi
9. Nelayan
10. Pemilik tanah
11. Pemilik bas dan kereta sewa
12. Lain-lain: _____

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- **Kesan-kesan alam sekitar**

Q27) Adakah alam sekitar berubah semanjak pelancongan di mulahkan?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen:

- *Hutan, sungai, hidupan liar, lading sawit*

Q28) Adakah kedatangan pelancongan meningkatkan kesedaran alam sekitar kamu?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen

Q29) Has tourism given you the incentive to protect the environment?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

Q30) What are your thoughts about the conflicts between the wildlife and village life?

- **Other impacts
(Socio-cultural impacts)**

Q31) Have there been changes in the local culture since the arrival of tourism?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

Q32) Have there been changes in traditional values since the arrival of tourism?

- ◇ Strongly agree
- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

Q33) Have there been changes in the behaviour of young people since the arrival of tourism?

- ◇ Strongly agree

Q29) Adakah pelancongan memberi kamu motivasi untuk memulihara alam sekitar?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua-duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen:

Q30) Apa fikiran/pendapat kamu tentang konflik-konflik antara binatang liar dan penduduk kampung?

- **Kesan-kesan lain
(Kesan-kesan sosio-budaya)**

Q31) Adakah budaya di kampung ini berubah selepas ketibaan pelancongan?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua-duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen:

Q32) Adakah tradisi dan amalan di kampung ini berubah selepas ketibaan pelancongan?

- ◇ Amat setuju
- ◇ Setuju
- ◇ Kedua-duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen:

Q33) Adakah gaya dan perangai belia di kampung ini berubah selepas ketibaan pelancongan?

- ◇ Amat setuju

- ◇ Agree
- ◇ Neither agree or disagree
- ◇ Disagree
- ◇ Strongly disagree

Comments:

- ◇ Setuju
- ◇ Kedua-duanya
- ◇ Tidak setuju
- ◇ Amat tidak setuju

Komen-komen:

(Training & Development)

Q34) What skills have you have improved since the arrival of tourism?

- ◇ Language skills
- ◇ Interaction skills
- ◇ Management skills
- ◇ Wildlife spotting
- ◇ Guiding and interpretation
- ◇ Other: _____
- ◇ Other: _____
- ◇ Other: _____

Q35) Which groups have benefited the most from training and development? (Pick 5 cards & rate)

1. Homestay operators
2. Boatmen
3. Young people
4. Tourism employees
5. Conservation workers
6. Transport providers
7. Other: _____

(Latihan dan Pembangunan)

Q34) Apa skil-skil kamu yang dimajukan semanjak ketibaan pelancongan?

- ◇ Skil bahasa
- ◇ Interaksi dengan pelancong
- ◇ Skil pengurusan
- ◇ Tinjauan hidupan liar
- ◇ Memandu dan terjamahan
- ◇ Lain-lain: _____
- ◇ Lain-lain: _____
- ◇ Lain-lain: _____

Q35) Kumpulan mana yang lebih untung dari latihan dan pembangunan? (Pilih 5 kad dan susun)

1. Homestay
2. Tukang bot
3. Belia
4. Pekerjaan pelancongan
5. Pekerjaan konservasi
6. Pemilik bas dan kereta sewa
7. Lain-lain: _____

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(Infrastructure)

Q36) How has the infrastructure changed with the development of tourism?

- *Communication (roads and communications)*
- *Sanitation (water supply)*
- *Healthcare facilities*
- *Schools*

Q37) What infrastructure in your village needs to be improved?

- The Future of Tourism

Q38) How do you think that tourism in your village can be improved?

- *More jobs?*
- *Attract more tourists?*
- *Decrease level of tourism?*
- *More language training?*

- Future Alternatives

Q39) Do you have plans for other sources of income in the future?

Q40) Can you recommend any other projects for your village to pursue in the future?

- *in terms of earning money/ conserving wildlife?*
- *More job opportunities*

(Infrastruktur)

Q36) Bagaimanakah infrastruktur di kampung kamu berubah semanjak kemajuan industri pelancongan?

- *Jalan raya dan telekomunikasi*
- *Bekalan air*
- *Kesihatan – hospital, klinik*
- *Sekolah-sekolah*

Q37) Infrastruktur apa yang perlu dimajukan di kampung kamu sekarang?

-Masa Depan Pelancongan

Q38) Bagaimana pelancongan di kampung kamu boleh dimajukan?

- *Peluang pekerjaan*
- *Tambahkan pelancong*
- *Kurangkan pelancong*
- *pelawatLatihan bahasa*

Pendapatan Alternif Masa Depan

Q39) Adakah kamu mempunyai cara-cara lain untuk menambah pendapatan di masa depan?

Q40) Adakah kamu idea-idea untuk projek-projek lain di kampung kamu di masa depan?

- *Projek yang meguntungkan*
- *Projek konservasi binatang liar*

Any other comments?

Komen-komen lain:

End of Interview - Tamat

Appendix 11

Sample of transcribed village interview

Date: 28/08/07

Time: 12:30pm

Duration:

Location: At B&B

Those present: Lala, interviewee, myself.

- Su came and started to prepare the walls for painting during Q4.
- He was very happy to expand and explain his responses; very easy to interview.
- He plans to open his B&B next year.

Total number in household: 5

(Adults= 2; Age 1-12yrs = 3 ; Age 13-18yrs =)

Details of household occupants above the age of 18:

Position in household	Name	M/F	Age	Present Occupation	Number of years	Edn	Intrvd?
		M	40	Marketing officer for palm oil company		F5	Yes
Wife		F	45	PA to the District Office		F5	No

Q1) How long have you/your family lived in Sukau?

I have lived in Sukau for 45 years. Both me and my wife were born here in Sukau.

Q2) What were your thoughts about tourism when it first started in Sukau?

When tourism first started in Sukau it was a new industry. I thought it was a good industry, and it should be continued because it could increase the economy of the people of Sukau, and raise our economic standards.

Q2a) What are your thoughts now?

Now I think that tourism should be maintained and sustained in Sukau. We also have other products to offer besides the proboscis monkey, and should highlight these – for example orang-utan viewing (KOCV) and cultural tourism. For example, tourists get to see live orang-utans in their habitat here in Sukau. Not many people know about KOCV, it's new. But I can see that more people are getting to know about KOCV and starting to come. Other products include exposing the tourists to the culture in Sukau. Wildlife viewing is good but also need to develop other things to complement it.

Q3) Would you like to be involved with tourism in your village?

Yes

Q3a) What are the issues regarding your involvement?

I plan to open a B&B next year. Promotion will be a big factor when the B&B is open – I know that this is a significant part of the project. I must advertise so that people will come and know about the place. I have not set the prices yet - I will have to calculate daily running costs in order to set what price it is going to be. I also do not yet have a name for

the B&B. I consider management as an integral part of the B&B. It is expensive to build the infrastructure. The buildings and also the landscape have to be beautiful to attract the tourists. We do get internet connection in Sukau but sometimes it's not fixed.

Q3b) Would training and development help enhance your involvement in tourism?

Yes. For example building courses, management courses for the B&B, and English language courses.

Q3c) How do you hope to get involved?

Currently building a B&B

Economic impacts

Q4) Is tourism important towards generating income?

Strongly agree. Tourism is very important for increasing the villager's income in Sukau. Sukau has many industries that have potential, for example tourism, agriculture. But in order to maintain Sukau as it is, for example the animals have habitats, sustainability, the forest and everything, tourism is the best industry to promote or to go for. If tourism remains in Sukau and continues in Sukau, our forest will be maintained and it won't become over-developed. Therefore we would have our forest reserves and water reserves. More importantly, previously Sukau was well known as a gift to the world. And this is connected to tourism because we have a lot to offer. I believe there is some truth to Sukau being a gift to the world. Although this has been used by the lodges and everything for marketing. But I believe we can capitalise on this and use this for promotion, for example on the internet when people click on Sukau, is also part of this Sukau being a gift to the world.

Q5) Do you think that tourism benefits your community sufficiently?

Agree. For conserving habitats/forest reserves. I believe that tourism is sufficient for the villagers. Because when they venture into tourism they get a lot more, they venture into something new, and they get to learn a lot more from tourism and probably they could get a lot of benefits.

Q6) Who do you think has benefited the most from tourism

1. Landowners
2. Lodge owners
3. Boat owners
4. Shop owners
5. Home-stay operators

Environmental impacts

Q7) Has the environment changed since the arrival of tourism?

Agree. Yes nature has changed since we have had tourism in Sukau. The forest has remained green, and there is a change of perception of the villagers towards the animals, for example they didn't care about the monkeys, but now they value the monkeys.

Q8) Has the arrival of tourism increased your environmental awareness?

Agree. There is also an increase in awareness towards the environment due to tourism. We need to conserve the habitats to reduce erosion. Tourism helps the need to conserve.

Q9) Has tourism given you the incentive to protect the environment?

Agree. The economy has increased. Yes tourism has motivated us to better ourselves. We have a lot of activities to do, to plan, in order to raise our income. And we are motivated to prepare for example boats, food, provide a display of culture or tradition to the tourists.

Q10) What are your thoughts about the conflicts between the wildlife and village life?

Lots of conflicts. Here there exists a huge conflict between animals and humans in Sukau. For example the oil palm plantation owners who will protect the plantations from elephants, the loss would be huge if the plantations would be destroyed. The actions that the plantation owners take against the animals it should be monitored, it should be curbed, so that the animals will not be extinct. But for now, the action that is taken is, the main choice is to have electric fencing. This keeps out the elephants so reduces the plantations from being destroyed. The fencing is not that expensive and usually the plantation owners, they talk about it before setting up the plantation.

(Socio-cultural impacts)

Q11) Have there been changes in the local culture since the arrival of tourism?

Disagree. No there has not been a change of culture here in Sukau. We are in fact trying to preserve and maintain our way of life, meaning that this is an important product that we can offer the tourists. For example, the music, our dancers. Tourism has revived the culture and developed activities, such as dance, music, traditional instruments.

Q12) Have there been changes in traditional values since the arrival of tourism?

Agree. Tradition has changed. Tourism has changed how the villagers think. It is improving now – the mentality of villagers is progressing.

Q13) Have there been changes in the behaviour of young people since the arrival of tourism?

Disagree. The changes are positive. We noticed that the change we see in the youths, it's for the better. But it is not necessarily just for tourism. They are also into other things like agriculture.

Training & Development

Q14) What skills have you improved since the arrival of tourism?

N/A

Q15) What groups have benefited the most from training and development?

1. Young people
2. Home-stay operators
3. Conservation workers
4. Tourism employees
5. Other (rest of the village)

He struggled with this question a bit.

Infrastructure

Q16) How has the infrastructure changed with the development of tourism?

Yeah there is a change in infrastructure. The major ones are roads, water, and telephone. And we do have internet now, though it is not reliable. But we do have it.

Q17) What infrastructure in your village needs to be improved?

The things that need to improve in terms of infrastructure would be the roads, crafts building, and the building they did for culture. And also a gallery for exhibits. And they also need to preserve the old buildings better here. We have a lot of old buildings here and almost all of it is gone now, so they need to preserve that.

He got a bit confused with this question

The Future of Tourism

Q18) How do you think that tourism in your village can be improved?

We need new products to promote Sukau more, for example in terms of history, folklores, and the rock across the river has got some history attached to it. So that could also be promoted if there were experts they could come and have a look at it. In order to improve tourism, it is important to maintain the current environment, the current setting. The forest has got to be sustained to satisfy the tourists and also the animals and its habitats should be maintained.

Future Alternatives

Q19) Do you have plans for other sources of income in the future?

I plan to open a B&B - this is currently under construction. I also plan to offer marriage packages at this B&B! I also plan to get involved in fish and prawn farming – this can feed the tourism industry. And this won't deplete the forest.

Q20) Can you recommend any other projects for your village to pursue in the future?

A good project that I recommended for the villagers to pursue would be a food processing centre or a food processing industry. Industry is required to sustain the livelihood of the villagers so we could probably venture into fish processing or something. It's also a good idea to have sungai people marriage ceremonies. I've seen this done in Peninsula Malaysia but this is for Malay marriage package. So a wedding package following the traditions of the sungai people would be good.

Appendix 12 Demographic information of villagers interviewed (and their partner)

	Sex	Age	Current occupation	Past occupation	Education
Interviewee A	M	37	President of Youth Association, Sukau	Forestry	F5
Interviewee B	M	38	1. Palm oil 2. Property rental	B&B operator	F3
Interviewee C	M	52	1. Head of Sukau primary school 2. Building a jungle camp		Diploma in Education
Interviewee D	F	50	Home-stay operator		None
Interviewee E	F	51	Home-stay operator		Primary 6
Interviewee F	F	55	Home-stay operator	1. Shopkeeper 2. Fishmonger	
Interviewee G	M	48	1. Palm oil 2. Home-stay	Ranger for Forestry Department	F3
Interviewee H	M	59	Palm oil		P6
Interviewee I	M		Guide & researcher for RAE	Self-employed	F5
Interviewee J	M	27	1. Freelance guide 2. Daily Paid Assistant for WWF	Fisherman	F5
Interviewee K	F	31	Housewife	Home-stay	F5
Interviewee L	M	54	Palm oil farmer	1. Driver 2. Boatman	Primary 6
Interviewee M	M	39	KOCP – education & research	Timber	F5
Interviewee N	F	40	Home-stay operator	Housewife	

	Sex	Age	Current occupation	Past occupation	Education
Interviewee O	M	40	Marketer for palm oil company		F5
Interviewee P	M	55	Palm oil farm		F4
Interviewee Q	F	49	Home-stay		F3
Interviewee R	M	67	1. Head of village 2. Palm oil farming 3. Rental accommodation		Primary 3
Interviewee S	M	44	B&B	1. Home-stay 2. Fisherman	F3
Partner of Interviewee A	F	39	Housewife		
Partner of Interviewee B	F	34	Dispensary nurse		
Partner of Interviewee C	F	43	Canteen operator		F5
Partner of Interviewee D	M	48	Boatman for RAE		Primary 3
Partner of Interviewee G	F	45	Home-stay operator		F3
Partner of Interviewee H	F		Unable to work	Home-stay	
Partner of Interviewee J	F	34	Housewife	Teacher	
Partner of Interviewee K	M	30	RAE	KOCP	F5
Partner of Interviewee L	F	49	Housewife		P6
Partner of Interviewee M	F	38	Housewife		F3
	Sex	Age	Current	Past	Education

			occupation	occupation	
Partner of Interviewee N	M	43	Boatman	Boatman	
Partner of Interviewee O	F	45	Personal Assistant to the District Officer		F5
Partner of Interviewee P	F	53	Nurse		
Partner of Interviewee R	F	56	Housewife		Primary 3
Partner of Interviewee S	F	38	1. Mother 2. Housewife 3. B&B		Completed secondary school