

Sustainable Tourism Development in Kampung Sekambal Cina Kampung Sekambal Tabuan Dayak



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Abstract

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Abstract

This report is about sustainable tourism development in the Malaysian state of Sarawak, Borneo. The objective is to identify the tourism potential of three villages in Lundu District.

The potential will be identified using concepts of sustainable tourism. The report seeks to inventorize present and future tourist attractions, and investigates tourism related socio-economical, bio-physical and institutional baseline conditions of the area. Special attention is given to the aspects of local participation and negative tourism impacts.

The potential of sustainable tourism development of the study area consists of the combination of a Cultural village where Home stay accommodation, e.g. longhouse, local foods, dance, handicrafts and agro-tourism could be included *and* four different ecosystems with rich tourism possibilities.

It is suggested that a Local Management and Monitoring Group is established to safeguard the interests of the locals and to monitor the possible impacts from a tourism development.

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Thank you to Nicholas and the Malaysians students for the good collaboration.

List of abbreviations

2TMP	Second Tourism Master Plan
BOD	Biological Oxygen Demand
COD	Chemical Oxygen Demand
DO	District Office
EIA	Environmental Impact Assessment
GDP	Gross Domestic Product
GIS	Geographical Information System
GG	Gunung Gading
GGNP	Gunung Gading National Park
GPS	Global Position System
JKKK	Kemajuan Kampung (the Village Security and Development Council/villagers)
Kpg	Kampung
MOT	Ministry of Tourism
MP	Member of Parliament
NIC	Newly Industrialized Countries
RSO	Rectified Skew Orthomorphic
SLUSE	Sustainable Land Use and Natural Resource Management
SPSS	Statistical Programme of Social Science
STB	Sarawak Tourism Board
UN	United Nations
UNEP	United Nations Environmental Programme
UTM	Universal Transverse Mercator
WHO	World Health Organisation
WTO	World Tourism Organisation
WTTC	World Travel & Tourism Council

1.0 Introduction

In 2001 the world had about 700 million international travellers, thus accounting for 11 % of global GDP (UNEP, 2003, www.unep.org). The tourism industry has been booming for the last two decades, reaching an expanding number and more distant destinations.

Tourism is unevenly distributed worldwide. European coastal destinations account for around 33 % of all tourist arrivals. Parts of the world have experienced a significant increase in tourist arrivals, especially in the developing world. Also *within* the developing countries, tourist numbers are growing due to expanding national economies, increased worker's benefit and development in the transport, among other things (Ghimire, 2001). In Asia many countries now rely significantly on the economical benefits from tourism. Despite negative impact from future global setbacks (e.g. terror attacks), the industry is likely to experience a continued increase in scope as well as in scale.

To benefit from this predicted development, the tourist destinations will have to adapt to the changing tourist demands. Since the early days of mass tourism in the 1960's, the tourist profile has changed significantly. The mass tourism product has no longer an appeal to the tourist. He is an independent tourist, who seeks a unique experiences and who is aware of the environment he visits (Poon, 1993).

Equally the planning and management of tourism require a dynamic and multifaceted approach to ensure a sustainable tourism development. Internationally, it is recommended, that tourism is integrated in any national or regional development plan to secure long term sustainability and avoid negative impacts on the human and natural resource bases (UNEP, 2003).

1.1 Sustainable tourism

Tourism as an industry posses advantages as well as disadvantages. In general, tourism has a major impact on local communities in tourist destinations. It can be a significant source of income and employment for local people. It can also pose a threat to an area's social fabric and its natural and cultural heritage, upon which it ultimately depends (UNEP, 2003). On the other hand, tourism is an important source of economic wealth and one of the fastest growing sectors in the world economy. Sustainable tourism has the potential to contribute to the conservation of biological diversity outside and inside protected areas (the Berlin Declaration, 1997).

The definition of "sustainable tourism development" was obtained during the International Conference of Environment Ministers on Biodiversity and Tourism, Berlin, 1997. The declaration states:

"Tourism activities should be environmentally, economically, socially and culturally sustainable...(...)...guided by the objectives, principles and commitments laid down in the Convention on Biological Diversity."

As stated in the Berlin Declaration, the stakeholders involved in the tourism industry are responsible for achieving sustainable tourism development. These stakeholders include Governments at all levels, international organizations, the private sector, environmental groups and citizens both in tourism destination countries and countries of origin.

The definition on sustainable tourism used in this report, is based on a more elaborated definition given by Shirley Eber (Eber, 1992):

“Sustainable tourism is tourism and associated infrastructure that, both now and in the future:

- Operate within natural capacities for regeneration and future productivity of natural resources
- Recognise the contribution that people and communities, customs and lifestyles, make to the tourism experience
- Accept that these people must have an equitable share in the economic benefits of tourism
- Are guided by the wishes of local people and communities in the host areas.”

We perceive sustainability as a development direction, not as a final goal. In this sense, sustainable tourism development is a process, which has to be monitored, evaluated and adjusted continually.

UN has made a list of guidelines relevant at all levels of government, see appendix 1 for a guideline index. The indicator list can assist local governments in monitoring the level of sustainability, assessing social, economic, environmental and institutional conditions.

In this investigation, the UN indicators are used as reference points to how impacts can be measured.

1.2 Objectives

“What are the potential of tourism development in and around the area of Kampung Sekambal, Kampung Sekambal Cina and Tabuan Dayak, and the potential consequences regarding the socio-economic, institutional and bio-physical environment.

More precisely, we want to investigate the:

- Baseline conditions. In assessing the tourism potential we have found it important to determine related biophysical and socio-economic resources as well as the institutional composition at all political levels?
- Local population. Do the inhabitants have an opinion on how tourism should develop? What are the incentives of the local people if they wish to participate in the development of tourism? Do they possess abilities beneficial to a potential development?
- Tourism characteristics. What are the present and future tourist attractions and facilities in and around our study area? Is it possible to recognize a tourist profile? Are the present tourism facilities sufficient and are the industry having an interest in our area?
- Impact assessment. By taking departure in the UN-indicator list we will try to recognize and estimate future socio-economic and environmental impacts from a tourism development in our study area.

1.3 Study area

The study area comprises 3 villages, Kampung Sekambal, Kampung Sekambal Cina and Tabuan Dayak. The villages are situated about 100 km North West of Kuching, the capital of Sarawak, Borneo. Lundu town, the nearest administrative centre, is situated 5 km to the south. 5 km North you find the coastal areas of Pandan and Siar Beach. Gunung Gading National Park occupies an area of 4106 hectares to the west of the villages.

The topographically mountains dominate to the west (Gunung Gading, 906 m) and flat agricultural plains, limited by a mangrove area joining the waterfront, to the east. The climate is tropical equatorial with annual precipitation rates around 5000 mm. Two seasons dominate the area, the wet season from October to February and the dry season from March to September.

Kpg. Sekambal, a Muslim Malay village counts 150 households. The neighbour villages Kpg. Sekambal Cina and Tabuan Dayak are dominated by respectively Chinese (60 households) and Iban (90 households). Village amenities in Kpg. Sekambal include a kindergarten, a primary school, a mosque, a kiosk, a football field and a community hall.

The villages are supplied with gravity water obtained from freshwater sources in Gunung Gading National Park. Electricity is supplied by the SESCO dam (hydroelectric generator). A project of solid waste removal will supply Kpg. Sekambal with 5 public bins.

Two main roads connect the area to the Kuching city, the Lundu - Bau Road and the Lundu - Sempadi Road. Both roads cross the Kayan River, where a ferry service provides the crossing. The Kayan Bridge is under construction, but has been delayed due financial reasons. The construction of the bridge is considered as vital link in the road system as well for the development of the Lundu area. The word says that the bridge is expected to be finish in five years from now.

2.0 Methodology

Several general problems are attached to the investigation of the tourism potential of Kpg Sekambal. First of all we have found it problematic to limit our study-area, since several internal and external factors at different political levels influence the potential. This has forced us to prioritise the most important subjects during our fieldwork and writing process and thereby leaving out interesting investigations. For example, exploring the heterogeneity of the societies, making more and regular biophysical samples and including more respondents in the structured interview guide, would give a more detailed picture of the study area. Secondly, general implications appear when working with a subject that is related to a future development. It necessitates hypothetical questions which are often difficult if not impossible for the respondents to relate to. The same problems appear when dealing with impacts related to a future development since actual measurements, of e.g. water samples, not reveals any future impact but rather provide us with baseline data.

This field work has been conducted in a joint collaboration between Danish and Malaysian student using an interdisciplinary approach. Being "natives", the Malaysian students possessed knowledge and language skills, which have benefited the common field work. Different academic training has meant that different points of view and knowledge was exchanged positively. Though at times, it could be difficult to agree due to these academic practises and not least due to different personalities. Nine people doing field work collectively demand an extremely structured process to keep focus on common objectives. This applied for the phase of

preparation and the conduction of the field work. Nevertheless, it has been a constructive learning process.

2.1 Flora and fauna survey

In order to recognize some indicator species, which can be used for future impact assessment, flora and fauna surveys were conducted.

2.1.1 Applied methods

2 mist-nets (4 meters x 3 meters) and 3 small bait-cages (20 x 20 x 40 cm), with fruit as bait, were placed in the forest between the community hall and the Sg. Sekambal.

Eye observations were carried out on flora at the beach, in the mangrove forest and in and around GGNP.

2.1.2. Discussion of Methods

Objectives not stated

Before the fieldtrip we decided not to carry out flora surveys and fauna catches for several reasons, but mainly due to time limitations. It takes months just to do a flora survey (Christensen, 2002). In a survey on diversity of bird species in GG, 1661.25 net-hours were spent to determine the number of species (Navjot, 2002). But In order to appraise *biodiversity* for example reptiles, mammals, insects, rodents as well as other orders in the terrestrial ecosystem such as fungi needs to be investigated. In add to this come all the aquatic species.

Plots chosen

It is important to determine which area needs to be examined. During our fieldtrip we only had the possibility to do fauna catches near the village, which is not relevant as ecosystem in matter of tourisms attraction.

Equipment

Nets

The nets we used will only reveal birds and bats flying near the ground. Furthermore we only had 3 nets at our disposal. In previous studies in the area 15-20 mist-nets were used at a time (Navjot, 2002).

Also the fact that a bird in the net will scare off other birds has to be considered as a major bias. Our nets were emptied randomly, at one time after more than 36 hours. (Navjot, 2002) emptied his nets every hour.

Cages

The cages are too small to catch larger rodents, reptiles and mammals. And even if we had bigger cages, these must be observed or at least emptied every hour.

Time span

As already stated by examples from fauna and flora surveys a long time is needed.

Technique

One technique of sampling may not be adequate to estimate species richness. Studies by Dawson (1995) shows that over 50% of the richness estimate from one survey technique may be species that are not sampled by another technique.

Field (2002) suggests that several “different-day repeat surveys” yield a higher richness estimate, than doing the “same-day survey”, which was done in our study – 3 days in a row.

2.2 Water sampling

In order to obtain baseline data, which can be used in future impact assessment, water sampling was carried out around our study area.

2.2.1 Applied method

Malaysian standard methods were applied for collecting and testing samples¹.

Surface water (within 30 cm from water surface) was collected in 3 samples at each spot. The collection at Pandan Beach was carried out ca 20 meters offshore.

Villagers informed us during interviews of the water dispersal from their household.

Heavy rain was experienced during the night between 20th and 21st January.

2.2.2 Discussion of method

Plots chosen

The composition of the area should be fully investigated. Identify the water input, the sewage dispersal, agricultural drainage systems, water shield, future tourism impact etc. In choosing our plots, old maps from 1973 were used as well as a quick overlook on the area.

Number of samples

Our sampling units are too small to use in any correlation or statistics. Having only 3 samples from each spot may cause an error if only one sample is e.g. polluted.

Number of plots

Samples were only taken at one spot in each stream. To calculate the impact of e.g. the sewage dispersal we would need to take samples lets say 10, 20, 50 and 100 meters from the outlet.

Time span

Daily and seasonal fluctuation will never be discovered in a one-day sampling. Ideally we would have to carry out water sampling from one rain *season to the other*.

Technically

Keeping field equipment sterile, and samples out of sunlight, is difficult if not impossible.

2.3 GIS

¹ An YSI-pH-Meter was used in situ as well as the Hydrolab Surveyor MK-II to test for salinity, temperature, turbidity, dissolved oxygen and conductivity. Basic field equipment allowed us to begin measuring the content of total coliforms and faecal coliforms a few hours after collection of samples. Furthermore using the HACH DR/4000 methods to measure ammonia and nitrate content. A themoreactor was used to measure (BOD) and (COD).

2.3.1 Applied method

GIS (Geographical Information System) is a system for capturing, storing, checking, integrating, manipulating, analysing and displaying data which are spatially referenced to the Earth (Heywood, 1998).

The purpose of using GIS in this project is as a presentation tool for the fieldwork findings.

Before the fieldwork secondary baseline (background) data has been collected. This information originates from a topographical map over the Lundu area. The information in the map has then been used for creating different background layers in ArcView and ArcMap.

Source of information	Information	Layers
Map over Lundu area Projection: Rectified skew orthomorphic, spheroid = everest (RSO) Scale: 1:50.000 Latest updated year: 1973 Source: DOS	Land use Infrastructure Coastal area Rivers	Agriculture Mangrove Shifting cultivation Road Coastal area Small rivers

Table 1. Secondary data source

During the fieldwork the group has collected GPS point of main infrastructure elements. These data has have been entered into ArcView/Map. Each specific infrastructure element is pictured as a unique layer.

Information – GPS	Layers
Tourist attractions	National Park Siar Beach Pandan Beach
Tourist facilities	Restaurant Resort Headquarter

Table 2. Data from GPS measurements

Information - Estimated	Layers
Tourist attractions	Rafflesia arnoldii Turtles Religious natural monument Waterfall Trecking area
Tourist facilities	Resort area Longhouse Boat trips Diving
Infrastructure	Estimated road

Table 3. Estimated layers

After the fieldwork, estimation of missing layers and creation of the final presentation maps has been conducted.

2.3.2 Discussion of method

Due to the age of the secondary data source, digitalised information must be considered somewhat out of date. The quality of the scanning, and thereby the resolution, influences the accuracy of the digitalisation of the different elements. The topo map is originally created in a RSO projection and later transformed into UTM – this creates an additional potential error.

To obtain an ideal digitalisation one should follow a set of rules to make sure that elements of the same type are digitalised the same way (e.g. TOP10DK). Due to the presentation purpose of the map and the limited number of objects, the fact that this was left out is of minor importance.

Considering the age of the map, the location of all relevant elements should have been verified through GPS measurements. Due to time constraints only some of these measurements were carried out. One serious lack is the missing measurement of the road network from Lundu to Pandan Beach. The 1973 map indicates that the road from Lundu doesn't go all the way to Pandan, but experience from the field study showed that this road continues even further than Pandan, to Blungi. Due to lack of communication, the exact location of the road was never verified, but merely estimated.

The final map serves as an overview of the area and its tourism facilities.

2.4 Interviews

2.4.1 Applied methods

Structured interview guide (SIG)

A structured interview guide is a prewritten guide with exact questions, allowing comparison between respondent's answers. The structured nature secure that specific topics are investigated.

Being a guide, it allows collection of supplementary information, although this information is less comparable. Thereby the SIG both contain qualitative and quantitative questions.

The target group was defined as the local population in the three villages. Through discussion, the group estimated that a 10 % sample size would be sufficient, taking into consideration the time limitation and the priority of the survey in relation to the remaining investigations. In all, the sample size included 29 households (Kpg. Sekambal Cina = 5, Tabuan Dayak = 9, Kpg. Sekambal = 15).

The topics covered in the SIG were the respondents' background, water use, land use, fishery, GG, Pandan Beach. The more important issue in relation to sustainability were the topics of tourism aspects and community ability.

The structured interview

The structured interview follows the characteristics of the SIG. Interviews were conducted with District Office and Agriculture Department.

The semi structured interview

This interview form supply in depth information on specific topics. Being semi structured, it leaves room for unpredicted subjects.

People with tourist related viewpoints, skills and experience were selected as key-Informants.

The informal interview

The informal interview serves as a source of general information. Though being more time consuming, it might reveal unforeseen issues as the respondent might feel more comfortable with the informal interview form.

Village walk

A participatory approach (inspired by PRA) where a number of key informants are interviewed in an informal and unstructured way, while walking together in the location of the study area. This approach has generated unforeseen data and a map of the village produced by the respondents.

2.4.2 Discussion of the structured interview guide

Basically the Danish and Malaysian students took point of departure in two different objectives when constructing the draft to the structured interview. SIG is therefore a product of two different mindsets and approaches, resulting in a long and complex interview guide. In the following the constraints attached to the SIG will be presented.

Standards

The validity of the answers might be influenced by the way one conduct the interview. We therefore found it crucial to agree on a standard approach when conducting the interviews. An example was; to be asking the same questions in the same way to different respondents. However in reality this consistency appeared not to work sufficiently.

Cultural

The Danish students might have been representing “international tourists” in the eyes of the respondents. This fact can have influenced some of the answers given on sensitive questions in the SIG (e.g. question no. 47, 48). The respondents might have answered positively to avoid being impolite.

Technical

In the shortening process of the SIG, relevant questions have been left out, such as questions revealing the age of the respondent and his incentive to take part of a tourism development.

The sample size is rather small (29 households) and this makes it difficult to find any statistical correlations between variables. One could find it obvious to make correlations between ethnicity/occupation and answers to tourism, but it is only the Malays that are fairly represented in the sample, so these correlations do not show any significant dependency. The limited random sample size has been unable to capture the diversity of the society, thereby excluding groups such as fishermen in our findings.

There are some questions which several respondents haven't been able to answer. This again lowers the validity of the question, since the population size in first hand is limited.

It is suspected that some information was lost during the interpretation. The enthusiasm of the respondent often made it difficult for the interpreter to translate successfully.

Clarification of terms

We need a more precise clarification of the local's perception of the concept “**tourism development**”. In the SIG we ask the respondent to come up with his own idea of a possible tourism development in Kpg Sekambal. It turned out that there are a lot of respondents that

cannot imagine what such a development can consist of and therefore are not answering due to the hypothetical asked question.

Constructing a question or scenario to which we ask the respondent to respond positively or negatively could have made such a clarification. By doing so the compatibility could enhance, which is desirable in an interview guide. But making the respondent relate to a scenario of which he cannot see the full consequences of, leads to invalid answers.

In relation to the lack of clarification of the tourism development concept some subsequent problems occur. In one of the questions we ask the respondent to consider possible effects without defining the effects from what. The same problems appear in subsequent questions where **we** do not define nor asks **him** to define what is meant with tourism development. So in conclusion, we have made the respondent answering questions, which are not clarified and this actually minimizes the validity of the answers.

Taken the abovementioned constraints into consideration we acknowledge the limited value of the SIG in relation to tourism issues. However we still believe that the SIG provides us with information that can be used in a general investigation of the local's attitude towards tourism. When relating this information with the information given in the semi structured interviews a more thorough picture of the local population's attitude appears.

The questions on baseline parameters were easier for the respondents to relate to, which allowed extended and more valid information.

2.4.3 Discussion of the semi-structured interviews

Several SLUSE groups were present under the meeting with D.O. and the Department of Agriculture. In order to make sure that all the groups would get the chance to ask questions to the representative, each group were given around half an hour. Due to this time limitation several interesting questions were left out when preparing the interview.

The representative at D.O. didn't have the authority to speak on behalf of superiors and the entire administrative system and therefore were not able to comment several of our questions.

Nonetheless we have succeeded in getting an overview of the institutional setting and influence in the area. This is partly from meetings with different authorities and partly from the use of secondary sources.

3.0 Results

3.1 Biophysical surveys

3.1.1 Flora & fauna

Unfortunately the nets and cages only revealed 2 birds, 2 bats and 1 squirrel, see appendix 2 for the list.

Furthermore eye observation on flora did not reveal any unexpected species, see appendix 3 for the list.

The park authorities gave us a list of birds, mammals and reptiles in the GGNP. See appendix 4 for the list.

3.1.2 Analysis of data

Unfortunately our findings do not allow us to estimate the fragility of the ecosystems or select indicator species. Other studies from the area reveals major diversity in rare species, 68.6 % of the species caught (Navjot, 2002), supporting the idea, that our data cannot be used to estimate the species richness.

3.1.3 Water quality

Results from water sampling show following

Plot Parameter	Gunung Gading ²	Community Hall	Sg. Sekambal	Sg. Blungi		Sg. Pandan		Malaysian Standard (drinking water)	WHO standard (drinking water)
				20 th	21 st	20 th	21 st		
PH	6.68	6.15	7.38	7.12	5.94	6.32	5.8	6.9-9.0	
Turbidity (FAU)	29.25	9.38	>1000	135	641	31.5	31.5	5.0-7.0	
Faecal Coliforms ³ (CFU)	20	40	200	200	No data	100	No data	100	0
Total Coliforms (CFU)	100	120	400	500	No data	280	No data	5	0

Table 4. Water sample results

Our structured interview guide revealed that <4% collects wastewater in a septic tank, the rest releases directly to the jungle or river, via the main drain in the village. For sewage 75% uses a septic tank, it should be noted however that one informant said, these were emptied directly into the river.

3.1.4 Analysis of data

In general we find it difficult to relate our water data from the field study to a future tourism development. The collection of data has been very biased and the results showed out to be very poor. Some general statements, based on our findings, will be presented in this chapter.

² Unfortunately it appeared to us AFTER collecting and testing the water samples that the reservoir no longer functions as drinking water supply to the community of Kpg. Sekambal. A new reservoir uphill is now used for this purpose. Due to lack of equipment we could not make any sampling in this reservoir.

³ Animals as well as humans may serve as a source in contamination (Brock *et al*, 2000), but this is not an international agreement. According to WHO, bacteria belonging to this group is evidence on human faecal contamination (WHO, 1997)

Drinking water

Levels of turbidity and coliforms are all too high in relation to health criteria (WHO, 1997). The water reservoir in GGNP collects rainwater from the mountain, and is uncovered and accessible for animals (as well as humans). This may explain the content of coliforms in the tap water in the village, since the water is not treated.

The pH is lower than normal standard for drinking water, probably mainly due to rain as the water supply.

Community dispersal

The samples from Sg. Sekambal were collected nearby the outlet of the main drain in the village. The data shows a high level in turbidity and coliforms due to high amount suspended solids arising from the discharge of organic detritus from the village.

The number of septic tanks show that some infrastructure planning of in particularly sewage dispersal is present, even though that ~24% release directly into nature.

Erosion / wash outs

The sampling made at Sg. Blungi and Sg. Pandan shows the impact of heavy rain on the washout from the land to the streams and rivers. Lowered pH and especially increased turbidity level is a consequence of the big amount of washed out soil particles.

A high amount of coliforms were seen in the samples from Sg. Blungi. There are no communities up stream from the sampling point, nor any live stock farming. We therefore believe the result is due to a sampling or test error.

3.1.5 Ecosystems

In the area around Kampung Sekambal we found 4 different ecosystems of interest in relation to tourism. The systems offer a unique variety in compositions of microclimate, flora and fauna, and it would actually be possible as a tourist activity to visit all four areas in a few or just one day.

- Gunung Gading National Park
- The beach area / near coastal waters
- Choral reefs
- The mangrove forest

It would not be possible to describe all 4 ecosystems in this report. We have chosen to exemplify the value of an ecosystem by looking at the mangrove.

The mangrove forest

A major mangrove area is situated east of Kpg. Sekambal at the mouth of the Kayan River. Several definitions on the term 'mangrove' exist in literature; one is the characteristic littoral plant formation of tropical and subtropical sheltered coastlines (Vantomme, 1995). Generally, mangroves are trees and bushes growing below the high-water level of spring tides. Their root system is regularly inundated with saline water, even though it may be diluted due to freshwater surface run-offs and only flooded once or twice a year. Very few plants are being able to tolerate saline mud and water, and tree species in the mangrove also differ from inland forest in that certain tree species are practical gregarious over extensive areas.

In addition to socioeconomic value in terms of timber supply, mangrove support the marine food web through production of detritus, which provides an important food source for shrimp, fish, molluscs, crabs birds and many other animals (Macintosh, 1984 rf. Ashton 2002).

No study on the biodiversity of the Sekambal mangrove has been published but a rough estimate would be that this area is comparable to the mangrove situated around 25 km north, the Sematan mangrove forest. A throughout investigation on the plant diversity and community ecology on this mangrove forest were conducted November 1999 (Ashton, 2002). Sematan mangrove holds a unique biodiversity, with many rare and threatened species. One example is the finding of the tree species *Xylocarpus granatum* in 89% of the transect plots in above-mentioned survey. The rarity of *X. granatum* elsewhere in Malaysia highlights the need for the area to be protected.

In general mangroves are vulnerable to disturbance from tourists, for example scaring off shy animals such as birds and reptiles (BfN, 1997). But we believe that the mangrove near Sekambal, which according to the locals holds salt-water crocodiles, could serve as a well-managed tourist attraction, an industry that might be essential in terms of preserving this area.

3.2 Socio-economic conditions

In the following the socio-economic conditions for the study area are clarified. This information has been collected through semi structured interviews with key informants and interviews with the local population using a structured interview guide. The survey unit of the interview guide is the household. In this case, a household is defined as “a number of people, usually a family, living under the same roof”⁴.

3.2.1 Household size

The interviews have showed that the 55 % of the households range within 5 to 7 persons (Appendix 5), while only one person contribute to the household income in 60 % of the households (Appendix 6). In most cases the main contributor is the head of the household.

3.2.2. Occupation

Agriculture is the typical occupation for the majority of the contributors, counting 43 % (Appendix 7). Equally the Headman of Kpg. Sekambal Cina and Tabuan Dayak estimate that the majority of the inhabitants in the two villages are employed in agriculture. Due to the proximity to the waterfront, we expected to find a more equal distribution of people working in fisheries and agriculture, but this hypothesis has showed to fall short according to the SIG. Only one household solely depend on fishery, while few combine it with agriculture. But this result might not tell the entire truth, since experience showed that fishing in some cases was a household activity all though the respondent didn't think of it as such. This information often showed by coincidence. Furthermore the constraints of the SIG should be considered (see Discussion of method). The second most common occupation proved to be workman (carpenter, construction worker etc.). Common for both professions are, that they require no or only few educational skills.

⁴ This definition of household causes some limitations in relation to the measurement of the household income, because not all of the household contributors live in the household. For example we experienced that the two children of an older couple were the only contributors to the couple's income and both of the children lived near Kuching. Therefore this should be taken into consideration when looking at the income figures.

3.2.3 Education

Compulsory schooling is only recently exists in Malaysia, which was reflected in the interviews. The educational level for the head of households varies between no education at all and secondary school. The total of 51% of the head of household has no education, followed by 31 % with a primary school degree (Appendix 8). Of the people without any education, 50% proved to work in agriculture, followed by 21% working as workmen (Appendix 9).

3.2.4 Income

When looking at the income we found that 72 % of interviewed households have an annual income under 10.000 RM. (Appendix 10). Compared with the average salary of an employee in the manufacturing sector of 20.000 RM/year, this seems very low (www.bnm.gov.my).

The common perception that higher education leads to better paid jobs is reflected in our results. Engineers and administrative employees are to be found in the higher income categories (30.000-35.000 RM/year), whereas farmers, fishermen and workmen are in the lower categories (0-15.000 RM/year) (Appendix 11). These findings merely emphasize the positive link between the type of education, the type of occupation and the income of the household contributors/head of household. Some households try to diversify their income through small scale business (fish cracker- and cake maker etc.)

3.2.5 Farming

Out of the 43 % respondents actively involved in farming, the majority have crops under permanent cultivation. The main crop is pepper and is grown by 34% of the farmers. Other crops grown in the area are coconut, cocoa, fruits (durian, langsat, rambutan, papaya and mango), paddy and vegetables. Pepper is cultivated as a cash crop, meaning that the farmers income depend on the marked prices. Steadily declining marked prices make it increasingly more difficult for the farmers to earn a sufficient profit. The government are subsidizing some farmers growing paddy, cocoa and pepper. The location of the fields is scattered around the villages. Both through eye observation and through the interviews we found out that cultivation also takes place within the borders of GGNP.

3.3 Institutional Setting in Lundu area

In the interview survey conducted during the field work, it became clear that only 5,6% of the people living in the study area during the gazetting of GGNP *did* actually participate in the decision making process. Furthermore the survey showed willingness among the locals to participate in the development of tourism.

For that reason, the point of departure in this chapter is the key question:

- What is the specific institutional setting for sustainable tourism development in Lundu area with special attention to local participation?

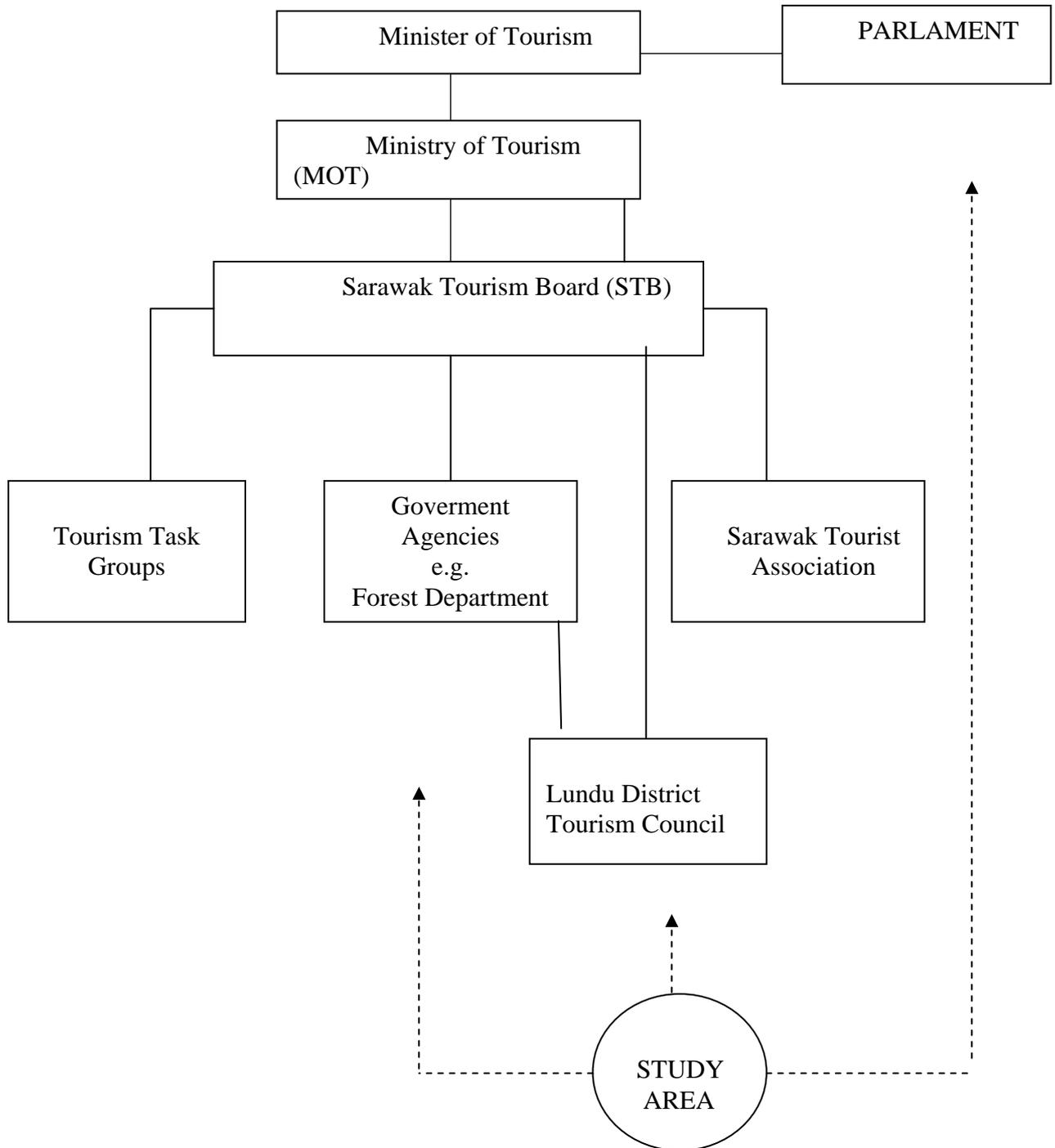
3.1.1 Local formal and informal organisations

The population of the villages in the study area have a number of informal networks, for instance a Women's Organisation. Through these bodies the locals can try to influence the formal decision making.

In each village a local council is constituted including a number of chairs, for instance a Headman and JKKK is appointed as kind of formal representative. Nine villages in the Lundu area, including the study area, have a collective representative in the Penghulu. Also the locals

can seek influence by addressing the local MP, and in this way bypass the influence from District and Municipal bodies (figure 1).

Figure 1. The Tourism Institutions in Sarawak



3.3.2 District Council

The administration of Lundu District is divided in a number of bodies, among them District Tourism Council. Unfortunately a meeting with this council was not possible during the length of the fieldwork.

Instead a meeting with The Secretary of the Lundu District Council was organised, providing useful information, though this council does not have tourism development as an objective:

- It was revealed that infrastructure amenities, supporting the tourism development, e.g. roads, water, security and general beautification of the area, were in the hands of the council.
- Currently talks were initiated about the development of an area next to Pandan Beach including parking lots, restaurants, toilet and washing facilities to cater a number of 5.000 guests/day. Locals had not so far been involved in the decision making process of this project.
- The aspect of sustainability in relation to tourism is guided and included in the overall Government tourism policy. For instance through the use of an EIA.

3.3.3 Sarawak State Institutional Organisation

The top institution in the hierarchically organisation of tourism in Sarawak is the Ministry of Tourism (MOT), fig. 1. The Marketing and promotional functions are carried out by the Sarawak Tourism Board (STB) who also advises and co-ordinates local initiatives at district level, between District and Municipal bodies, local Tourism Task Groups, and the Sarawak Tourist Association (www.sarawak.gov.my). Funding at local level is possible through the collection of taxes from local economic businesses but the District bodies can apply the MOT for funding allocated to specific tourism related projects (interview with Secretary of Lundu District Council).

Other State institutions with relations to tourism are numerous. Similar for these institutions are that their main objectives are other than tourism, but that in some aspects of the area of authority they are closely connected to the development and maintenance of tourism. Such institutions are for instance Ministry of Infrastructure and Communication. Environmental Impacts Assessments (EIA) is deployed by the Ministry of Environment, and applies e.g. when new constructions are build.

The role of the Forest Department is crucial though, since it manages all the National Parks and other protected areas in Sarawak, including GGNP. Programmes for teaching nature management are carried out. The purpose is dual; to protect fauna and flora, and at the same time promote nature and create awareness of environmental issues to the tourists and other visitors. Some locals are employed in the GGNP, for instance as guides (Interview with GG Manager).

The Second Tourism Master Plan

The most important policy document concerning development of tourism in Sarawak is the Second Tourism Master Plan (2TMP) according to MOT. This document outlines the conceptual framework for tourism development and pinpoints target groups and key areas, as well as recommendations for future initiatives. 2TMP is effective in the period 1993-2010. The following text is based on the 2TMP.

The concept of sustainability is used in reviewing impacts from tourism. Also there are no serious general imminent threats steaming from the impacts of tourism industry itself, says 2TMP, but adds that obvious negative effects of tourism could keep some groups of tourists away.

Cultural impacts from tourism is described in the host - guest relation, and stresses that public participation in the decision making process, control of outsider influence and ownership, and directions of management and human resource development in the tourist industry is needed to be investigated to avoid disenchantment of the local people.

General Tourism Guidelines and Strategy

The 2TMP final guidelines and strategy for future tourism development in Sarawak concludes that tourist development could be seen as having five dimensions:

- Product development
- Marketing
- Management and operations
- Access
- Contribution to socio-economic development

Product development. It is suggested to broaden the product base, in terms of attractions, accommodation and locations. New products could be sea kayaking, wildlife viewing, white water rafting, head-hunters trail etc. Accommodation more moderately priced aimed at local and domestic markets to supplement upmarket hotels are needed.

Marketing. Several aspects are pointed out. But it is suggested to marketing Sarawak centred on the "culture, nature and adventure" concept with beach tourism as supplement.

Careful *management and operation practices* are essential, especially when tourism is culture and nature based since that resource base, human or natural, can be badly damaged by poor management. A high environmental standard has become more and more valuable among the tourists.

Strategies to enhance tourism contribution to the *socio-economical development* are based on a better co-ordinated, managed and market-oriented strategy. By local participation, benefits from tourism are likely to be distributed and retained within Sarawak.

Lundu area

Based on the above-mentioned guidelines or concept, the 2TMP give advises to specific areas of Sarawak. For this purpose Sarawak is divided in three zones; northern, central and southern. These zones are again divided in seven key areas where Lundu/Sematan is included in one.

Kuching is the largest centre of population in the southern tourism zone and will in time generate the largest local tourism and recreational demand.

In developing this zone as a tourism destination, following aspects is to be pursued.

- Extending cultural tourism
- Provide accessible opportunities for nature and adventure tourism
- Develop recreational opportunities primarily for the local and domestic markets, notably water based destinations within a reasonable distance of Kuching e.g. at Santin Island, Batang Ai, Lundu and Sematan.

A newly imitated "Home-stay" programme, promoted in Semantan area, could be seen as a response to this suggestion (key-informant at MOT).

Another result of 2MTP is a comprehensive programme for teaching the locals skills of handicraft and prepares locals for the expected tourism development. This is also reflected in interview survey in the study area. Ideally this will disperse economical benefits among the locals, and in this way enhance aspects of sustainability.

3.3.4 Federal Tourism Organisation

Being a state in Malaysia, Sarawak has its own elected government and legislative assembly. For this reason the tourism planning and development is by and large autonomous in comparison to the Malaysian Federation.

Both at state and federal level tourism as an industry itself is fortunately integrated in the general development plans, and thus follows the recommendations from UNEP (UNEP 2003).

3.4 Local population

Local participation is a crucial element in sustainable tourism development. Taking the three statements of Shirley Eber (1992) into consideration, we find it important to investigate what are the attitudes of the local population in relation to tourism development. More specifically we wish to look into the incentives of the local population going into the tourism industry, what are their abilities and what are their wishes for participating.

The following examination will be based on semi structured interviews with the local population and selected questions from the interview guide (the percentages used in this section will all be based on valid percent).

3.4.1 Incentives

Through additional information given by the respondents to some of the questions in the interview guide it appears that the main incentive for local people to take part of a tourism development is economic.

An answer given by one of the respondents to the question about whether he was interested in getting new knowledge or skills for tourism purpose was: "yes, he would like to get experience to increase own benefit". The economic benefit seems to be crucial in an area where the majority of people earn less than 10 000 RM pr year.

3.4.2 Abilities

The local population's traditional skills and specializations can be related to their ability to take part of a tourism development. The financial basis of the local population in Sekambal area is rather limited (see section 3.2.4) and it is therefore not likely that they will be able to make large-scale investments in a future tourism industry. On the contrary, we believe that the locals' abilities to be part of and contribute to a tourism development will be through selling small-scale services and local products.

From the interview guide it appears that 69 % think their family possess traditional skills whereas 76 % believe their community have traditional skills (Appendix 12).

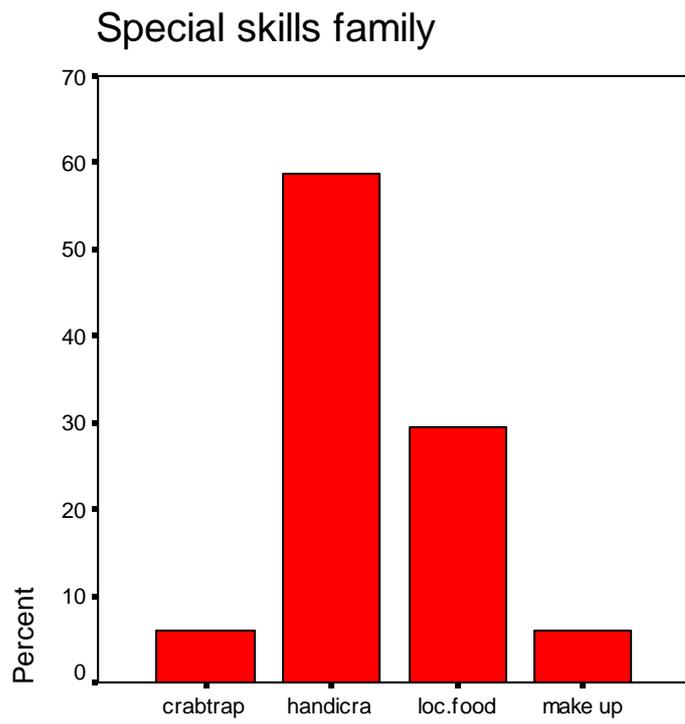


Figure 2.

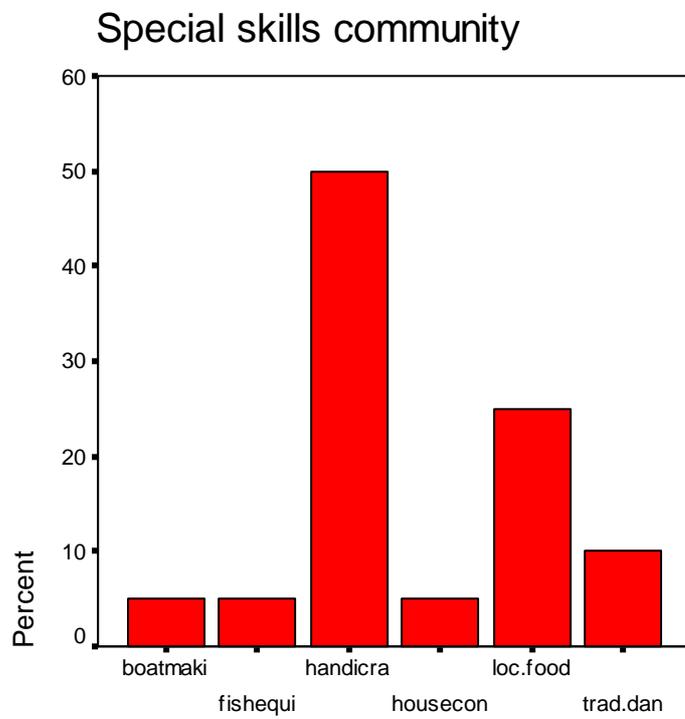


Figure 3.

Handicraft making and local food are the dominating skills both within the family and community (Figure 2 and 3). 10 % of the respondents also mention traditional dancing as a skill within the community. These skills can be attractive to possess in relation to tourism development. However the rate of success engaging in these activities will depend on the type and amount of tourists coming.

Taking part in a tourism development requires some additional abilities. First of all it is important to invest the time needed in order to be able to provide the demanded services and products. A key-informant stressed that because most women are housewives they will have the time needed to engage in tourism. She believes that the women will be willing and able to provide the tourists with handicraft and local food.

Secondly, it requires a minimum ability to communicate with tourists; this is especially relevant in situations where foreign tourists are involved. Communication with foreign tourists necessitates minimum English skills. Introducing foreign tourists to this area would therefore require the training of these people in Basic English. Maybe the problem will be less severe in the near future since the children learn English from primary school.

3.4.3 Participation and tourism development

The local population generally wish to participate in future tourism development. They have a positive attitude towards tourism and a small amount of key-respondents have thorough ideas about what a future tourism development can consist of.

At the time being there are relatively few people engaged in the tourism industry in the area of Kpg Sekambal. 93% answered negatively when asked whether they were engaged in tourism development (Appendix 13). Of these 87 % responded positively when asked if they wanted to participate in future tourism development (Appendix 14). Equally a majority is also willing to introduce their culture and share daily life activities (Appendix 15). Furthermore, 83 % of the respondents believed that the community would be willing to engage both in the planning and implementation phase of a tourism development process (Appendix 16).

It is worth emphasising that the positive attitude in the answers given might be influenced by the locals' anticipation, that tourism development can be seen as a mean to increase household income as indicated in section 3.2.4.

When asking more specifically into what a future tourism development could consist of, several ideas came up. The creation of a longhouse or home stay for the tourists is among the limited answers given in the interview guide. This idea is in line with the suggestion from one of the key-informants. He recommends that locals' and tourists could live together in the same house, because the tourists thereby can experience the daily life of the locals, have the traditional dishes and be part of the daily activities such as handicraft-making and farming.

Besides longhouses, agro-tourism is also mentioned as a tourism development possibility. A key-informant finds the idea of agro-tourism interesting. The key-informant suggest that tourists can join the farmers in their daily activities and e.g. help them harvest pepper or local fruits. She also recommends selling packages of agriculture products, consisting of e.g. cocoa and pepper as souvenirs.

Finally, a key-informant with five years of experience in arranging boat trips states that he will like to take tourists diving at Talang Talang or on fishing trips. It is only the lack of money that prevents him from arranging such trips. Several key-respondents mention the nearby mangrove as a possible tourism attraction.

In line with Shirley Eber's statement, we found it was important that the local population would gain economic benefit from engaging in a tourism development. An increasing profit was in fact the solely incentive to go into such a development.

In relation to the local populations abilities and contribution to tourism development the examination showed that handicraft making and local food production were the most frequently possessed skills. Traditional dance was also mentioned as a local skill. Furthermore it appeared that women generally have the time needed to engage in tourism and possess the abovementioned tourism skills.

Finally the investigation revealed a persuading number of people wishing to participate in a future tourism development. Generally the answers given in the SIG on the locals perception of a tourism development is rather limited, this can partly be explained by lack of perception and partly by lack of time to consider their answers. Some of the key-informants had extensive ideas about what a future tourism development could consist of though.

3.5 Tourism Characteristics

The accurate number of tourists going to Lundu area is unknown, but figures on visitors to the areas' best known tourist attraction indicate a relatively small number. In 2002 a total of 11.736 people visited GGNP and this is actually a slight decrease of 8,9 % compared to 2001, according to GGNP Headquarter. The statistics also shows that more than 85% of the visitors are locals and that visitor arrivals are rather evenly distributed during the year. Rafflesia blooms at different times all year round. This could be the reason for absence of a "peak-season".

From interviews with five tourists visiting this area, it was realized that all five tourists arrived from Kuching to see the Rafflesia and returned on that same day. This pattern of "daytrippers" is also reflected in the statistics of GG, where only 25% of the visitors to the park stay overnight at the adjacent accommodation facilities.

There are several existing and potential tourism attractions and facilities in and around the study area (see table 5). The existing attractions such as GGNP, the coral reefs at Pulau Talang Talang and Pandan and Siar beach are already developed to some extend.

Information given by the locals reveals that there are potential tourist attractions and facilities that have not yet been developed. Among these are home stay, handicraft making and local cuisine as well as agro tourism and boat trips in the mangrove.

We will in the following discuss whether these potential tourism activities and facilities can be developed sustainable and thereby be a part of the overall tourism potential of the study area. The discussion will concern the general conditions for developing the specific activity or facility and the possible negative consequences. In order to mitigate some of these negative impacts, suggestions to a future management will be given.

Attraction /	General conditions	Negative impacts	Future management	Tou-
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facility			- or how to avoid negative impacts	rism Potential
Home stay	<ul style="list-style-type: none"> Labour/know how/attitude Infrastructure/ Basic (roads, pier etc and water and electricity) Tourist related (accommodation/ transport/ operators etc and institutions) Finance/ Investments (private and state) Land tenure (use and ownership) Climate/season 	Human, Cultural and Environmental	Local participation Development of infrastructure Development of human resource base Monitoring of indicators (initiate)	
Handicraft and local cuisine		Human and Cultural	Local participation Development of infrastructure Development of human resource base	
Agro-tourism		Cultural and Environmental	Local participation Development of infrastructure Development of human resource Development of natural resource Monitoring of indicators(initiate)	
Mangrove		Environmental	Local participation Development of infrastructure Development of human resource Development of natural resource Monitoring of indicators(initiate)	
Gunung Gading NP		Environmental	Monitoring of indicators	
Pandan and Siar Beach		Human and Environmental	Local participation Development of infrastructure Development of human resource base Development of natural resource base Monitoring on indicators(initiate)	
Coral reefs		Environmental	Development of infrastructure Development of human resource base Monitoring on indicators (initiate?)	

Table 5. Framework for tourist attractions and facilities

4.0 Discussion

The tourism potential is based on the human and natural resources, and these resources' ability to support a tourism development. The discussion of the potential will be done with point of departure in the aspect of sustainability. Actually, the potential discussed is based on ideas coming from the locals, and is in this sense a part of sustainable tourism development, as defined by Shirley Eber (1992).

In line with previous tourism arrivals to the area and the expected prognosis from STB and MOT the study area is identified to cater primarily domestic tourists. It is expected that in time the number of foreign arrivals will increase. Because of this dynamic nature of the tourism industry we have decided to limit the timeframe to 5-10 years and will therefore primarily be dealing with domestic tourists.

4.1 Ecosystems as tourist attractions

As previously described four very interesting ecosystems are situated close to our study area. It is not possible in this report to give an in deep description of the tourism potential in all ecosystems. In exemplifying an option for future development we have chosen the already described mangrove. But shortly the reason for choosing the other ecosystems as relevant:

- **Beach area/near coastal waters.** Possible sea turtles watch, long stretched of sandy beaches perfect for swimming and leisure time, near coast coral reefs.
- **Gunung Gading National Park.** Rafflesia, jungle treks, waterfalls, already developed tourist infrastructure.
- **Coral reefs at Talang Talang.** A form sustainable tourism, in terms of biodiversity protection, is already conducted here. Assumed to be very attractive to divers.

4.1.1 The mangrove

Even though tourism, along with agriculture, aquaculture and coastal urbanisation is on the list of activities threatening the mangrove ecosystems, tourism is also a tool in conservation management and sustainable development (Ashton, 2002) & (Gössling, 2002).

One example is the Kpg. Kuantan Firefly Reserve in Selangor, where the 2,000 villagers of Kuantan are dependent on a mangrove area as a tourist attraction. More than 2,000 visitors a month generates an income for a majority of the villagers, through boat operating, guiding or selling local handicraft. Due to this industry, it is of the villagers' best interest to keep and preserve the area (Hamzah, 1997).

The locals of Kpg. Sekambal have through many generations used the mangrove area for hunting, fishing and collecting firewood and timber. They have, therefore, a well overall knowledge of the area in terms of fishing sites, wildlife attractions and spots for watching animals. They might even be able to point out special fragile areas, where tourism should be avoided.

A possible way to experience this unique form of ecosystem could be to enter the mangrove directly from Kpg. Sekambal by boat or kayak, lead by a guide. This guide, having the needed knowledge on the ecosystem, will have several functions. For example pointing out well-camouflaged animals, such as snakes and birds, but also making sure that only a certain area is used for tourism purposes, hunting prevented etc.

Developing tourism in the Sekambal mangrove is an example of a small-scale development without the need for large investments:

- Boats are already present. Whether their condition is sufficient for bringing tourist need to be investigated. According a local with guide experience, security rules (a minimum quality of equipment) exist.
- Knowledge on the attraction is present.
- Departure could take place at the river anchor side in Kpg. Sekambal Baru, which is present. Though the condition and accessibility could and probably need to be improved.
- Local skills, in terms of guides, are present. Being a small scale business, few guides would be needed initially. As mentioned, one respondent have tourist guide experience and would be willing to venture as a guide, if he had the needed capital.

The only preparation needed, will be to point out the specific area. This should be done in cooperation between biologists and the local from the village.

To safeguard the sustainability of this activity it is of crucial importance that monitoring repeatedly takes place, perhaps by a local management group. Since the mangrove will serve as tool in matter of attracting tourists this will emphasize the need for water dispersal treatment from the upland areas and hopefully inspire the villagers in a direction of non-disruptive use of the mangrove.

4.2 Cultural Village

Does the concept of cultural village, comprising several facilities such as home stays, longhouse (Iban village), local cuisine and handicraft, exist in our study area?

4.2.1 Home stay

To create a home stay requires few financial means. Considering the general income level of the population in our study area, an investment might represent a certain risk if loans have to be made. Suppose this investment is possible without making any (major) loans, owners of the accommodation will get a direct economic benefit. Ashley (2000) estimate that in some Muslim countries, women occupies under 10% of jobs in the tourism industry, but that women's accessibility in the industry are increased through low-skill domestic job types. A key-informant from Tabuan Dayak indicates that the women represent a potential workforce. Our findings show that 4 women were working outside the household, but that the majority were housewives. Unfortunately the SIG was conducted at household level, which makes us unable to reveal the household members' amount of "spare time". Some women express willingness to participate in a tourism development. Supposing the time and motivation is available, the women could act as managers and thereby allowing an increased and diversified household income. Changing the women's role would have consequences for the entire household. Though gaining importance and independence, the women could experience an increased burden, still having to carry out their domestic duties (Ghimire, 2001). This could also affect the childcare. Men venturing as home stay owners would equally influence the household, especially if the man is the only contributor to the household economy (see socio-eco baseline). Without putting the household economy at risk, he would need to have another income source. Wanting to participate in the tourism development, the locals could join courses currently supplied by MOT to upgrade their knowledge (see institutional setting). In relation to home stays, courses could be about hygiene, economic and practical household and accommodation management.

Home stays can be more or less integrated, depending on the peoples' willingness to share their daily life with the tourist. We found that a majority of people are willing to participate in various ways, but suspect that their attitude is influenced by their anticipation towards tourism (see Results). Ashley (2000) supports this finding and state further that employment in tourism often is regarded as a "good job", though the preferred form depends on the individual household. Depending on the type of home stay, tourists will affect the households differently. Norms and cultural values could be interchanged between the tourists and the locals, but the nature of the effects would be a matter of perspective. The Muslim norms (Kpg. Sekambal) permit no drinking. Tourists with different norms might create a conflict, as their behaviour would be inconsistent with the one of the society. On the other hand, being located in a religious society the home stay could attract tourists of the same believe. Then again, religion could also attract people who are interest in experiencing cultures that are different from their own.

4.2.2 Longhouse

Being an Iban village, Tabuan Dayak would be an ideal setting for a longhouse. To a large extent, the consequences on peoples livelihood would correspond to those related to home stays, but it would demand another size of investment. This investment could be community based, thereby requiring certain management skills, entrepreneurship and common incentives among the locals. Whether all these resources exist in Tabuan Dayak is not sure. Though, one key informant stressed that he would be willing to construct a longhouse, if the financial means were available. One could argue that a newly constructed longhouse, which would be needed in this village, would be less attractive than an authentic one. Even if tourist were interested, other obstacles have to be considered, such as an exact location. Considering the location, the Headman of the village suggested two possible locations on community land (see appendix 17). Experience shows, that travel agencies and tour operators invest in communities in return for longhouse accommodation (semi structured Borneo Adventure). The danger of private investments could be that the investor would have the power to control the setting and livelihood of the locals. Another source of investment could be by the MOT (see institutional setting)

4.2.3 Local cuisine, handicraft, dance etc.

Being a part of the suggested tourism attractions, local food, handicraft and dance, are also activities that are possible for the women to venture into, not least because they possess the needed skills and time. Moreover these activities require little start capital, which make them available for most locals. The combination of these activities is a part of the representation of the local culture, which again could help reinforce the unique value of the society and their self-perception.

4.2.4 Agro tourism

A chance to have a look into daily life of the local people is to participate in daily activities such as farming practices. Examples of such tourism activities are widespread all over the World: French wine farms, Israeli kibbutzes and Indonesian paddy fields.



Pepper plantation in Kpg Sekambal

In our study area, paddy fields and pepper plantation are relevant agro tourism activities. The activity will consist of e.g. cultivating and harvesting or simply following the local farmer through his day in the field. Spending a day with a farmer will, besides the activity in itself, probably reveal interesting information on previous and present form of lifestyle in the Sekambal area.

4.3 Preconditions

In the development of the abovementioned tourism activities and facilities various preconditions has to be in place. Whether these exist will be discussed following.

4.3.1 Infrastructure

Access to the area is generally good in terms of transport, especially from Kuching. Though, one major obstacle is the crossing of the Batang Kayan River. The initiated construction of a bridge is essential to shorten the time of transportation, which is crucial to the large contingent of one-day visitors to the area. Furthermore a representative from Borneo Adventure argues that the tourism industry lack incentive to invest in the area as long as the bridge is not constructed. Locally the road system should be improved, which is partly in progress already.

Electricity is currently sufficient to supply the local demand, but a future tourism development is likely to require an increased capacity. There is a need to further investigate the size of the capacity demanded to supply an increase in tourists.

The capacity of gravity feed water to the area is generally good and is estimated to be able to provide a larger demand. The supply of water is periodically none existent due to the construction and management of the pipeline. To satisfy tourism needs it is essential that the supply of water is constant year around. A further investigation of future demands is required. The quality of the drinking water is questionable since the concentration of coliforms bacteria is too high compared to international standards. In order to supply future tourists with uncontaminated drinking water cleansing is necessary.

The wastewater and sewage is currently untreated, and is mainly released directly into nature. High concentrations of coliforms are found in the river and at the beach and without initialising any form for wastewater treatment these two places loose their attraction as swimming destinations. In general, being a nature destination where large-scale conservation measures are prioritised, this kind of environmental pollution is unfortunate and incompatible to the tourism incentives.

Solid waste management has recently been initiated, but the capacity appears to be way to low. Garbage disposal were spread throughout Kpg Sekambal and in order to make the village appear attractive a comprehensive cleaning needs to be done.

4.3.2 Finance

Based on the socio-economic survey the financial means needed to develop tourism facilities is apparently not present locally. So far Kuching citizens have done investments in tourism near the coastal area, but state subsidies could be in place to involve and benefit the local population on specific small-scale tourism projects. Such an initiative would diversify the source of income and hence decrease the dependency to one occupation. Still receiving micro-credits involves the risk of debt in case of failure.

4.3.3 Labour

The existing labour force is adequate in number but generally without tourism related experience. An enlarged or at least continued effort in educational programmes aimed at locals who will pursue tourism related employment is essential. So far state programmes on e.g. handicraft making seems well suited for this purpose. A positive result could be human resource development and increased employment.

Generally the local population of the study area expresses willingness to participate in future tourism development. This seems to be motivated by the expectation of economical benefits.

4.3.4 Management

The environmental management of land outside the protected area is apparently scarce in terms of monitoring impacts from tourism. Though policy plans motivates this control, a more thorough enforcement of environmental issues is needed. A regular and successive monitoring on specific parameters in fragile environments could be able to foresee negative impacts from tourism development. A local tourism task group with the objective of safeguarding local's wishes and ideas in the tourism development could be established among the local's. The group could pursue allocation of funds for tourism purposes, prevent negative social, natural impacts from tourism and initiate a comprehensive monitoring plan of these impacts. Funding for tourism purposes could be applied for different state institutions, e.g. MOT and District Tourism Council and Ministry of Environment. Also this body could increase general public awareness of environmental issues.

4.3.5 Promotion

Presently the promotion of the study area is empowered STB, who focuses only on GGNP. Future promotion should incorporate abovementioned tourism products to trigger the development, and the promotional effort should be coordinated with the local tourism task group. For instance would a marketing effort that focuses on the natural uniqueness of the area be well suited in the general State promotion of Sarawak.

And if the aspects of environmental awareness and best practice are carried out successfully among the locals and implemented in tourism, the area could be labelled a sustainable tourism destination. This is likely to generate a positive image and subsequently attract more tourists with the economical benefits attached.

We see the potential as a variety of locally established tourist products that under certain preconditions can be developed in the future combined with the already existing attractions. It is important to emphasise that the single attraction is not exclusive, but it is the combination of different attractions that makes the area unique (see Appendix 18).

4.4 Potential

When discussing the tourism potential of the study area it is important to include the context in which, this potential is situated. The permanent quality of GG NP and Pandan Beach to continuously attract tourists is essential for the study area, since the agglomeration of tourism in the area is expected to generate economic benefits. On the other hand, more attractions will increase competition between the tourist destinations and activities. Ongoing tourism in Sematan, which appear to contain a larger capacity than Pandan Beach, has the potential of supplying the Lundu area with tourists but at the same time keep them away from the study area. It is important that tourism development at both localities is coordinated and connected to obtain maximum benefits and to avoid counterproductive initiatives.

The economical growth that many countries in Asia have experienced has expanded the urban middle classes. As a consequence of this development mass domestic tourism has evolved in e.g. Thailand (Ghimire, 2001). Mass tourism is generally not considered sustainable since it does not operate within “the future productivity on natural resources” and is not “guided by the wishes of local people” as e.g. Shirley Eber puts it. There is no apparent reason to why this phenomenon should not also occur in Malaysia subsidiary in Sarawak. Kuching, the largest city in Eastern Malaysia is only two hours away and Kuala Lumpur only 4. Therefore this seems very relevant.

The employment of the locals in the tourism industry and the derived economical benefits could easily have very long term perspectives. Considering that only a few locals in our study area are currently engaged in tourism, and that no immediate employment boom in the industry is expected, one could expect the local labour to choose another income strategy than tourism. If a local however choose tourism related work, it can be a supplement to other income sources. Such a job however can also affect the time spend on other jobs and thereby make him more dependent on the tourism job. Where the only income derives from tourism, the local is especially vulnerable towards global fluctuations in the tourism industry. Despite the degree of involvement, the economical share of the benefits to the locals is uncertain, and for that reason might not be sustainable.

Finally, the aspect of local participation. Local participation does not necessarily equal actual influence in decision making. Given the prospect of a future tourism development the locals can pursue their interest, e.g. through the establishment of a Local Tourism Task Group. But one could argue that the source of tourism investments and the institutional bodies, decides the degree of actual influence. In other words, constructing a body with local representation does not secure that tourism development will be conducted sustainable. Nevertheless, it will increase the chances, but in the end it is primarily the State Government of Sarawak that through good governance can secure the aspect of local participation hence a sustainable tourism development.

In more general terms, it is widely debated if such a thing as sustainable tourism at all is possible due to the impacts and very nature of the tourism industry. It is beyond this project to argue pros and cons to this matter. Yet a long term development of a small-scale tourism with local participants, where most negative impacts are monitored and prevented, is most likely to be sustainable if supported by the State. For that reason the study area is believed to possess a sustainable tourism potential, but whether the potential will be exploited in a sustainable way is another matter.

5.0 Conclusion

Through our investigation of the study area and its surroundings we have come to the conclusion that the potential of a sustainable tourism development consist of a variety of places and attractions.

Our study area, consisting of three villages; Kpg. Sekambal, Kpg. Cina and Tabuan Dayak, is surrounded by four very interesting ecosystems with rich tourism possibilities. The study area is perfectly situated in the very centre of these potential attractions and will serve as a point of departure. Furthermore the village has the possibility and local willingness to create a tourism atmosphere and facilities, such as home stays, longhouse and restaurants. Its also our believe that the cultural heritage of the villagers will serve as an economic supplement by offering the tourists local food, agro tourism, handicraft, dance etc. The tourism development will additionally create other job opportunities in the transport sector, tourist guiding, infrastructure facilities maintenance, just to mention a few.

In the next 5-10 years the study area will be able to serve as a tourism destination for local and regional tourists on long weekends or shorter holidays. But in order to exploit this potential we find it of crucial importance that some basic infrastructure conditions are developed as well as an economical funding of this development.

To make sure, that the basic means of sustainability is incorporated in the tourism development and in carrying out this industry we suggest an establishment of a local Management and Monitoring Group, consisting of locals from the study area.

6.0 Acknowledgement

We will like to thank the District Council of Lundu, The Agricultural Department of Sarawak, Sarawak tourism Board and Ministry of Tourism for supporting us with information and discussions on the tourism potential of our study area.

The villagers at Kampung Sekambal, Kampung Sekambal Cina and Tabuan Dayak have provided us with all sorts of information and thereby enabled a large part of our investigation. We are very grateful.

Thank you to Nicholas and the Malaysians students for the good collaboration.

Time schedules

Robert Schmidt

January 15th 2003.

Arriving Kuching 09.15 am and spending the day in Kuching City. Expecting to be contacted by our local counterpart group but this never happens.

16th

Attending the official welcome at UNIMAS. Afterwards, the Danish and Malaysian students joints up to present ourselves and to prepare departure for Kampung Sekambal.

17th

Arriving Kampung Sekambal around 15.00 pm. After welcomes ceremony all the students, the JKKK and our interpreter inspect the surroundings including the Pandan Beach. The JKKK supply us with a lot of relevant information, which help us in directing our field study.

The pilot study takes of in the evening, by trying out our interview guide on randomly selected households. Many biases appear during my interview with a malay-family in Sekambal Melayu. A meeting afterwards in the community hall is cancelled due to noise from heavy rain.

18th

We are trying to enhance the quality of the interview guide and testing once again. In the evening our objectives for the entire field study are changed due to “supervision” from the teacher group. Unfortunately it has the consequence that the Danish and the Malaysian students now have a set of objectives and goals each.

19th

Presentation in Lundu District Council from 9.00 am To 2.00 pm. At a group meeting in the afternoon we delegate tasks for upcoming meeting with District Office, Forest Department and Agriculture Department, in which I attend. I construct a random sampling of the households in Kampung Sekambal

20th – 26th

Lack of insufficient memory capacity reveals me from creating a detailed schedule for the entire week. In general all evenings were spend on conducting interview with households. I should join the water sampling team, but due to communication errors this failed. I spent a day on statistics studying, created an interview guide to fishing middlemen, conducted informal interview with headman of Pandan, inspected hospital facilities due to a sting-ray, conducted informal interviews with tourists, the Punghulu, the owner of Boys Place (a bar) and the JKKK. This latter was a replacement for a villagewalk in Kampung Sekambal which was cancelled due to absence of the village participants. Furthermore looking at “resorts” in the beach area, the SESCO electricity dam, the water reservoir which supplies the village with fresh-water, a one-day GGNP summit trek, Rafflesia spotting, exploring the facilities at GGNP resort and info-center.

We had on shift the daily responsibility for group meetings, plan schedules etc. The week ends with a presentation of our findings to the villagers in a gathering in community hall.

27th

Preparing for Kuching departure, long evaluation meeting in the study group and a farewell party with the villagers.

28th

Leaving Kampung Sekambal. The next two days in Kuching are used on data treatment and preparing our final presentation in UNIMAS the 29th. Leaving Kuching February 1st.

Karen Lilleør

Thursday 16

During the joined preparation at UNIMAS I was among the ones discussing the SIG.

Friday 17

After the reception and arrangement of sleeping bags, we discussed the SIG shortly and we all participated in the first pilot-studies. Evaluation in the evening.

Saturday 18

I was group leader for the day (responsible for the agenda and practical tasks). Among the ones responsible for buying food that day and elaborating a dinner plan for the next weeks. Made the corrections to the SIG. Conducted interviews.

Elaborating the final SIG. Made arrangements with Phungmulu about receiving name lists of the villagers and a village walk in Kpg Sekambal (this was later cancelled though)

Evaluation

Sunday 19

Group discussion on definition of concepts to the SIG. Presentation of project in Lundu. Evaluation

Monday 20

Conducting interviews SIG. Arrangement of villagewalk in Tabuan Dayak and Cina. Evaluation.

Tuesday 21

Conducting interviews SIG. Eye-observation in Cina, drawing map of the households in the village. Preparing village walk in Tabuan Dayak and Cina. Evaluation

Wedensay 22

Conducting interviews SIG in the morning. Village walk in the afternoon. Evaluation

Thursday 23

Preparing meeting with GG management. Conducting interviews SIG. Evaluation

Friday 24

Informal interview with GG management. Interview SIG. Fauna sampling. Informal interview with villager in the evening.

Saturday 25

Informal interview with villager, watersampling

Sunday 26

Preparing the village presentation. Cleaning the place

Monday 27

Making sure all the documents were copied. Village presentation. Packing

Thursday 28

Departure, Kpg Sekambal

Wednesday 29

Semi-structured interview with Borneo Adventures

Thursday 30

Debriefing at UNIMAS

Mette S holm

Friday 17

Beginning of our fieldwork. We used the most of the day discussing our objectives and the structured interview guide (SIG). I conducted my first test interview. Late evening evaluation.

Saturday 18

The group reviewed and refined the interview guide. Doing the practical correction at the computer. Were responsible for making a dinner plan for the following days. After dinner I conducted our second test interview. Evening evaluation of the 2. test.

Sunday 19

Group discussion on preliminary presentation, sample size, definition of concepts and on the presentation at District Council. Group presentation at Lundu District Council. In the evening, I prepared the paper on the agreed definitions.

Monday 20

At the morning meeting I volunteered as responsible for collection of the conducted interviews. After the final corrections of the SIG, I went to town accompanied by Asraff and Tsai copying the total number of interview guides needed. Afterwards the boys and I went searching for suitable water collection points. Doing eye observation of the coastal area and infrastructure. After dinner I conducted the first "true" interview in collaboration with Saini, who translated. Evening evaluation; An meeting for an semi-structured interview with the Headman of Pandan has been set up. Lars, Asraff and I are the winners!

Tuesday 21

Preparation of interview with the Headman of Pandan. Conduction of the semi structured interview with Headman of Pandan. Writing down the conducted interview. In the afternoon, eye observation and GPS measurements of Kpg. Sekambal Cina. Conducting SIG in the evening.

Wednesday 22

Besides being the group leader of the day, meaning being responsible for the agenda and practical tasks, I spent the whole day doing interviews, 2 in the morning and 2 in the afternoon/evening. Led the evening evaluation.

Thursday 23

Preparing for the meeting at Gunung Gading. 2 structured interviews in Tabuan Dayak.

Friday 24

Semi structured interview with Forest Department Gunung Gading, Gunung Gading manager. Eye observation of Gunung Gading National Park and Rafflesia. Informal interview with tourists at Gunung Gading.
Status on field work

Saturday 25

Semi structured interview with key informant. Writing down the interview.

Sunday 26

Cleaning the Community Hall. Checking up all the structured interviews and copying them.

Monday 27

Farewell- and speech of thanks to the villages and the involved people.

Tuesday 28

Departure to Kuching

Wednesday 29

Debriefing UNIMAS, making sure the collected data of the GIS was copied.

Thursday 30

Kuching. Semi structured with Borneo Adventure Carsten Jensen and Philip Young

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Appendix 1

Sustainable development: Theme Indicator Framework

<u>SOCIAL</u>		
<i>Theme</i>	<i>Sub-theme</i>	<i>Indicator</i>
<u>Equity</u>	<u>Poverty</u> (3)	<u>Percent of Population Living below Poverty Line</u>
		<u>Gini Index of Income Inequality</u>
		<u>Unemployment Rate</u>
	<u>Gender Equality</u> (24)	<u>Ratio of Average Female Wage to Male Wage</u>
<u>Health</u> (6)	<u>Nutritional Status</u>	<u>Nutritional Status of Children</u>
	<u>Mortality</u>	<u>Mortality Rate Under 5 Years Old</u>
		<u>Life Expectancy at Birth</u>
	<u>Sanitation</u>	<u>Percent of Population with Adequate Sewage Disposal Facilities</u>
	<u>Drinking Water</u>	<u>Population with Access to Safe Drinking Water</u>
	<u>Healthcare Delivery</u>	<u>Percent of Population with Access to Primary Health Care Facilities</u>
<u>Immunization Against Infectious Childhood Diseases</u>		
<u>Contraceptive Prevalence Rate</u>		
<u>Education</u> (36)	<u>Education Level</u>	<u>Children Reaching Grade 5 of Primary Education</u>
		<u>Adult Secondary Education Achievement Level</u>

	Literacy	Adult Literacy Rate	
Housing (7)	Living Conditions	Floor Area per Person	
Security	Crime (36, 24)	Number of Recorded Crimes per 100,000 Population	
Population (5)	Population Change	Population Growth Rate	
		Population of Urban Formal and Informal Settlements	
<u>ENVIRONMENTAL</u>			
<i>Theme</i>	<i>Sub-theme</i>	<i>Indicator</i>	
Atmosphere (9)	Climate Change	Emissions of Greenhouse Gases	
	Ozone Layer Depletion	Consumption of Ozone Depleting Substances	
	Air Quality	Ambient Concentration of Air Pollutants in Urban Areas	
Land (10)	Agriculture (14)	Arable and Permanent Crop Land Area	
		Use of Fertilizers	
		Use of Agricultural Pesticides	
	Forests (11)	Forest Area as a Percent of Land Area	
		Wood Harvesting Intensity	
	Desertification (12)	Land Affected by Desertification	
Urbanization (7)	Area of Urban Formal and Informal Settlements		
Oceans, Seas and Coasts (17)	Coastal Zone	Algae Concentration in Coastal Waters	
		Percent of Total Population Living in Coastal Areas	
Fresh Water (18)	Fisheries	Annual Catch by Major Species	
		Water Quantity	Annual Withdrawal of Ground and Surface Water as a Percent of Total Available Water
			Water Quality
Biodiversity (15)	Ecosystem	Concentration of Faecal Coliform in Freshwater	
		Area of Selected Key Ecosystems	
	Species	Protected Area as a % of Total Area	
	Species	Abundance of Selected Key Species	

<u>ECONOMIC</u>			
<i>Theme</i>	<i>Sub-theme</i>	<i>Indicator</i>	
Economic Structure (2)	Economic Performance	GDP per Capita	
		Investment Share in GDP	
	Trade	Balance of Trade in Goods and Services	
		Financial Status (33)	Debt to GNP Ratio
			Total ODA Given or Received as a Percent of GNP
Material Consumption	Intensity of Material Use		
	Energy Use	Annual Energy Consumption per Capita	

Consumption and Production Patterns (4)		Share of Consumption of Renewable Energy Resources
		Intensity of Energy Use
	Waste Generation and Management (19-22)	Generation of Industrial and Municipal Solid Waste
		Generation of Hazardous Waste
		Management of Radioactive Waste
	Waste Recycling and Reuse	
Transportation		Distance Traveled per Capita by Mode of Transport
<u>INSTITUTIONAL</u>		
<i>Theme</i>	<i>Sub-theme</i>	<i>Indicator</i>
Institutional Framework (38, 39)	Strategic Implementation of SD (8)	National Sustainable Development Strategy
	International Cooperation	Implementation of Ratified Global Agreements
Institutional Capacity (37)	Information Access (40)	Number of Internet Subscribers per 1000 Inhabitants
	Communication Infrastructure (40)	Main Telephone Lines per 1000 Inhabitants
	Science and Technology (35)	Expenditure on Research and Development as a Percent of GDP
	Disaster Preparedness and Response	Economic and Human Loss Due to Natural Disasters

Appendix 2

List of fauna catches

Results from nests and traps:

24/1:

- Little spiderhunter (*Arachnothera longiotra*)
- Rufang – tailed tailorbird (*Orthotomus sericeus*)
- Spotted –winged fruit bat, (*Balionycteris maculata*)

25/1: None or they were not collected before 26th.

26/1:

- Long-tounged nectar bat, (*Macroglossus minimus*)
- Slender-squirrel, (*Sundaclunis tenuis*), caught in the trap near the river
- Short-nosed fruit bat, (*Cynopterns bruchyoptis*)

Appendix 3

Flora survey (observation)

1. Primary and Secondary Forest

- *Dillenia sp.*
- *Melaleuca leucadendron*
- *Canarium odoratum*
- *Alstonia sp.*
- *Mangifera sp.*
- *Shorea sp.*
- *Hevea brasiliensis*
- *Hibiscus tiliaceus*
- *Gardenia odorata*
- *Ficus sp.*
- *Morinda citrifolia*
- *Durio zibethinus*
- *Macaranga sp.*
- *Nephelium lappaceum*
- *Musa sp.*
- *Artocarpus sp.*
- *Canarium sp.*

2. Mangrove Forest

- *Rhizophora sp.*
- *Bruguiera sp.*
- *Nypa fruticans*
- *Oncosperma tigillarum*
- *Caryota sp.*
- *Avicennia alba*

3. Beach Forest

- *Terminalia catappa*
- *Calophyllum inophyllum*
- *Casuarina equisetifolia*
- *Hibiscus tiliaceus*
- *Pandanus sp.*
- *Cocos nucifera*

Appendix 4

Check list of birds at GGNP

N O	SPECIES NAME	REMARK/NOTE
1	Many coloured-barbet	Seen at park compound
2.	Greater Racket - Tailed-Drongo	As above
3.	Argus pheasant	By calling
4.	Crested Wood Partridge	By calling
5.	(Asian) Fairy Bluebird	Seen along trail
6.	Common (Greater) Coucal	Common at park area
7.	Chestnut-Breasted Malkoha	Along the trail
7.	Rufous-Backed Kingfisher	Sebeman river
8.	Black hornbill	Park boundary
9.	Blacked-And-Yellow Broadbill	Along the trail
10	Garnet Pitta	Along the trail
11	Yellow-Bellied Bulbul	As above
12	Black-And-White Bulbul	As above
13	Magpie Robin	Common at park compound
14	White-Rumped Shama	Along the trail
15	Black-Throated Babbler	In the bush at park compound
16	Mountain Tailorbird	Along the trail
17	Little Green Pigeon	Near park compound
18	Spotted Dove	Seen at the electric wire
19	Emerald Dove	Along the trail
19	Scarlet-Rumped Trogon	Along the trail
20	Green Broadbill	Park compound

.		
21	Little Spiderhunter	Sucking banana flower
22	Chestnut Munias	Checklist
23	Java Sparrows	Common at park area
24	Yellow-Breasted Flowerpecker	Common at park area
25	Swallow	Flying above the office
26	Gaudy (Red-Throated)Barbet	caught inside the office
27	Asian Paradise Flycatcher	Along the taril
28	Pied faint tail	Along the trail

Check list of mammals in GGNP

N O	SPECIES NAME	REMARK/NOTE
1	Plaintain Squirrel	Seen eating fruit at the park compound
2.	Provests Squirrel	as above
3.	Long-Tailed Macque	Found at the boundary
4.	Bearded Pig	Seen at Batu Bekubu
5.	Bornean Red Munjtjac	By calling
6.	Malay Weasel	Seen eating fruit
7.	Yellow-Troated Marten	Crosing the at prak compound
8.	Common Porcupine	Seen at the boundary
9.	House RatBlack-Caped Fruit Bat	Roosting at office varenda
10	Three-Striped Groiund Squirrel	Seen at the trail
12		
13		

Checklist of reptiles at GGNP

N O	SPECIES NAME	REMARK/NOTE
1	Common Monitor lizard	Seen crossing the planwalk
2.	Pit Viper	Found at the boundary
3.	Pyton	swallow the bear cat. found at the boundary

Appendix 5

No. Of people sharing the household income

No. of people sharing the hh income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	3,4	3,4	3,4
	2	2	6,9	6,9	10,3
	3	5	17,2	17,2	27,6
	4	1	3,4	3,4	31,0
	5	5	17,2	17,2	48,3
	6	6	20,7	20,7	69,0
	7	5	17,2	17,2	86,2
	9	3	10,3	10,3	96,6
	11	1	3,4	3,4	100,0
	Total	29	100,0	100,0	

Appendix 6

No. of contributors to the household

No. of contributors to the hh income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	17	58,6	58,6	58,6
	2	11	37,9	37,9	96,6
	3	1	3,4	3,4	100,0
	Total	29	100,0	100,0	

Appendix 7

Occupation

Type of occupation

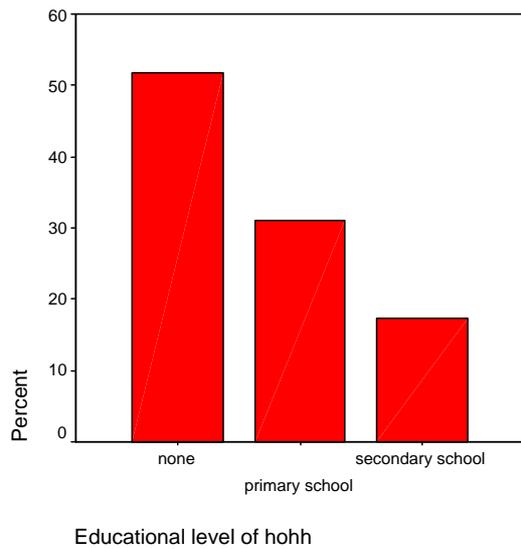
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	administ	2	6,9	7,1	7,1
	agricult	12	41,4	42,9	50,0
	carpente	1	3,4	3,6	53,6
	contract	3	10,3	10,7	64,3
	cook	1	3,4	3,6	67,9
	dep.agri	1	3,4	3,6	71,4
	engineer	1	3,4	3,6	75,0
	fish/agr	2	6,9	7,1	82,1
	fisherma	1	3,4	3,6	85,7
	pension	1	3,4	3,6	89,3
	school	1	3,4	3,6	92,9
	security	1	3,4	3,6	96,4
	see note	1	3,4	3,6	100,0
	Total	28	96,6	100,0	
Missing	NA	1	3,4		
Total		29	100,0		

Appendix 8

Educational level

Educational level of hohh

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	none	15	51,7	51,7	51,7
	primary school	9	31,0	31,0	82,8
	secondary school	5	17,2	17,2	100,0
	Total	29	100,0	100,0	



Appendix 9

Education and occupation

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Type of occupation *						
Educational level of hohh	28	96,6%	1	3,4%	29	100,0%

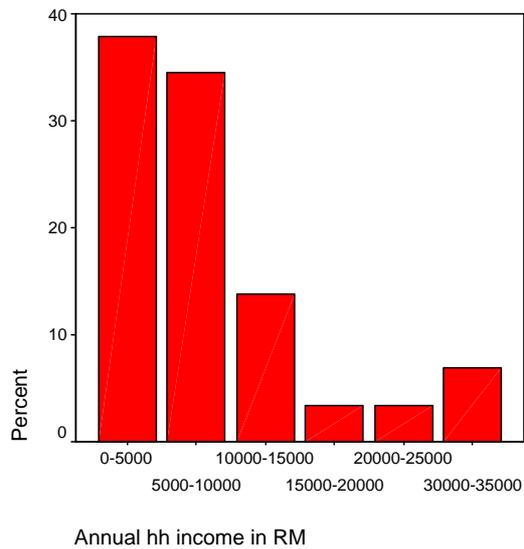
Type of occupation * Educational level of hohh Crosstabulation

Count

		Educational level of hohh			Total
		none	primary school	secondary school	
Type of occupation	administ	1		2	3
	agricult	7	5		12
	engineer			1	1
	fish/agr	2	1		3
	fisherma	1			1
	pension		1		1
	service		2	1	3
	workman	3		1	4
Total		14	9	5	28

Appendix 10

Income level distribution



Appendix 11

Income and occupation

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Type of occupation *						
Annual hh income in RM	28	96,6%	1	3,4%	29	100,0%

Type of occupation * Annual hh income in RM Crosstabulation

Count

		Annual hh income in RM						Total
		0-5000	5000-10000	10000-15000	15000-20000	20000-25000	30000-35000	
Type of occupation	administ				1	1	1	3
	agricult	6	4	2				12
	engineer						1	1
	fish/agr	1	1	1				3
	fisherma	1						1
	pension	1						1
	service	1	2					3
	workman	1	2	1				4
Total		11	9	4	1	1	2	28

Appendix 12

Traditional skills within family

Are there any traditional specialization, skills in your family

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	20	69,0	69,0	69,0
no	9	31,0	31,0	100,0
Total	29	100,0	100,0	

Traditional skills within community

Are there any traditional specialization, skills in the community

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	22	75,9	75,9	75,9
no	7	24,1	24,1	100,0
Total	29	100,0	100,0	

Appendix 13

Local participation in tourism development

Do you participate in the ongoing tourism development

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid yes	2	6,9	7,1	7,1
no	26	89,7	92,9	100,0
Total	28	96,6	100,0	
Missing 77	1	3,4		
Total	29	100,0		

Appendix 14

The wish of the local population to participate in a future tourism development

if no, would you like to participate in the future tourism development

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	13	44,8	86,7	86,7
	no	2	6,9	13,3	100,0
	Total	15	51,7	100,0	
Missing	88	1	3,4		
	99	13	44,8		
	Total	14	48,3		
Total		29	100,0		

Appendix 15

Willingness to introduce their culture

Are you willing to introduce your culture

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	24	82,8	100,0	100,0
Missing	88	5	17,2		
Total		29	100,0		

Willingness to share daily life activities

Are you willing to share your daily life activities with tourists

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	28	96,6	96,6	96,6
	no	1	3,4	3,4	100,0
Total		29	100,0	100,0	

Appendix 16

Willingness of the community to participate in the planning and implementation

In general do you think your community are willing to participate in

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	planning	1	3,4	5,6	5,6
	implementation	2	6,9	11,1	16,7
	both	15	51,7	83,3	100,0
	Total	18	62,1	100,0	
Missing	88	11	37,9		
Total		29	100,0		