

6 Agriculture Group results

In the following chapter the agriculture group will present their results from the ten days field work in the Kundasang area. The results will be presented under the following headings; land, labour, organisations, water and market. These headings reflect the core of the interview guide used during the household interviews.

Almost all information was gathered from interviews, mostly household interviews (see appendix 8). All together 59 household interviews were conducted with farmers in the area. Furthermore, the following key informants were interviewed; the Assistant District Officer (ADO), the Area- and Group Managers from KPD, and a Filipino middleman from the local market. Some information comes from these interviews. In addition to the interviews some information was gathered from master plans and reports accessed after arriving to the area. Where nothing else is stated all information is based on the household interviews.

6.1 General description of agriculture in the Kundasang area

Vegetable production has been known in the area for some time, but was increased when the Sandakan-Kota Kinabalu road was constructed in 1955, and again when it was sealed in the 1970's (Lim, 1995). The production is very intensive and carried out on small plots of land scattered among areas of undeveloped land still covered with secondary forest or scrub vegetation. The average area cultivated for each farmer is 4.6 acre (1.9 ha). The most common vegetables grown are cabbage, tomatoes, cauliflower, broccoli and onion (AUR, 1984) and some farmers grow rice for their own consumption.

As most children attend school the majority of farm work is done by the adults in the family; often the number of people who take part in the agricultural production is limited to two persons per household unless hired labour is used.

6.2 Land

Land is a necessary resource for agriculture and while land availability was mentioned as a constraint for expanding agricultural production by some of the farmers, it was evident that large areas within the study area were left unused. In order to analyse the reasons for this, land matters were investigated and the results are presented under the following headings; land tenure, acquisition of land, and utilisation of land.

6.2.1 Land tenure

The majority of the farmers interviewed own land; only 5 out of 59 farmers interviewed rent or borrow land. The majority of the renters in our sample rented their land from local people but one rented from a person from Western Malaysia. Some of the respondents expressed that it is not unusual that people from the Cameron Highlands purchase land in the Kundasang area and rent it out.

Different opinions were expressed when respondents were asked about reasons for renting out land. The main reason for renting out land was to generate income. Another reason for renting out land was to avoid having to clear the land; land clearing is considered a very time and labour consuming task and some farmers also pointed out that it is a costly affair. If land is rented out uncleared the renter must perform this task and all the renters in our sample have actually done so.

Some farmers mentioned that they chose not to rent out land because they doubted that it was profitable and others mentioned the risk of conflict between owner and renter.

6.2.2 Acquisition of land

There are three different ways that farmers can acquire land; by applying the government for land, by inheriting the land and by buying land. Almost all the landowners of our sample have obtained land through application and many farmers are waiting for the title of their land. Only a limited amount of the land in the Kundasang area is not owned by people already. The land that is left and can be obtained by application is less suitable for agricultural production, either because it is situated in the remote areas where there is a lack of good infrastructure or because the slopes are steep and the soil fertility low.

The formal procedure of applying the government for land is to wait for the land title before the land is cleared or cultivated (KPD, pers.comm.). In practice, the farmers claim ownership of land by clearing and cultivating the land before the land title has been obtained (KPD, pers.comm. and household interviews). There are various reasons for this. One is, that applying for land is a time consuming procedure; one farmer pointed out that his application had been under consideration for 10 years. Furthermore it appears to be common belief among the farmers that the chances to get hold of a specific piece of land by applying, increases if it is already cleared and cultivated.

In theory, application can be done for two acres of land for each adult in a particular household. In practice however, farmers obtain more land due to lack of proper administration (ADO, pers.comm.). This eagerness to get hold of land results in farmers owning more land than they are able to cultivate.

Apart from getting land through application, inheriting land is the most common way people in the Kundasang area receive land and was mentioned often by the respondents in our sample. Land is often kept as an investment for the future of the children. Apart from getting land through application, inheriting land is the most common way people in the Kundasang area receive land and was mentioned often by the respondents in our sample. Land is often kept as an investment for the future of the children. Another way to become a landowner is to buy land from other people. The number of people buying land is limited; buying land is expensive and generally the landowners are reluctant to sell their land because land is often considered a security investment. However, some of the local people did mention that they were willing to sell land if they could get a good price. The households who mentioned selling land as an economic activity were some of the more well-off farmers.

An interesting point in relation to peoples unwillingness to sell land is that a few of the respondents, mostly local Dusun people, expressed their concern about the distribution of land in the Kundasang area. If they had to sell land they would prefer to sell land to other local Dusun people even though the economic benefit would be lower, the reason for this being that they are concerned about losing control of land matters to people from outside Kundasang.

6.2.3 Utilisation of land

The possibilities for increasing agricultural production is affected by the way people are currently using their land and by their plans for future land utilisation.

Most of the farmers in the sample own land areas that are currently not used for agriculture. Some of this land is fallow land, a practise mostly used by the farmers who grow rice, some is used for grazing of cattle. The major part of the unused land is however still under secondary forest or scrub vegetation and is not considered fallow land by the farmers themselves. The reasons why this land is left uncultivated are many; the majority of the farmers mentioned lack of labour and capital as the main constraints for clearing and cultivating this land. Other reasons mentioned were fragmentation of the land owned which resulted in long distance to the fields, poor accessibility due to lack of adequate infrastructure, lack of water supply near the field, fields located in areas with too steep slopes and low soil fertility.

The Chinese farmers interviewed use the land which they rent for very intensive vegetable production. The absentee landowners, according to local farmers, either rent out land or keep it for development for tourist purposes. Many of the large unused areas we observed were, according to the local farmers, land left for future development by absentee landowners.

In summary it can be said that there is a willingness among the farmers to increase the agricultural production, either by expanding the cultivated area or by increasing the intensity of farming. Furthermore, the majority of respondents were either planning or interested in using their land for agricultural purposes. According to the group manager of KPD in Kundasang the vision of seeing the hills of Kundasang covered in green and seeing Kundasang developed as a tourist centre is not only the vision of the Chief Minister, also local people have the same visions (KPD, pers.comm.).

6.3 Labour

The majority of the farmers interviewed depend on family labour for their farming activities. This ranges from cases where only one person does the farm work, as in situations where the husband has employment elsewhere and farming is left to the wife, to cases where, not only the immediate family is involved, but the extended family, as well. For farmers not hiring labour, labour may be considered a constraint in the sense that the total amount of labour available in the household is not sufficient for their present farming activities or not sufficient for a future expansion of cultivation.

As regards hired labour, a distinction is made between immigrant labour, which usually means Indonesians, and local labour. The immigrant labourers are, for the most part, recruited legally, although there are a few cases where illegal immigrants are also hired.

Labour was named by most of the farmers we interviewed as the most important factor that hinders them from increasing agricultural production. Labour problems can however, mean different things to different farmers as exemplified below.

6.3.1 Immigrant Labour

The main problem that was mentioned in connection with foreign labour is cost, which many consider prohibitive. A farmer has to pay 1.000 RM per year for the passport of each immigrant

he hires. But for the Chinese farmers with large areas¹ of rented land, the quotas for hiring immigrant labour set by the government, rather than the cost, seem to be more constraining. If we take the example of the farmer who has 300 acres of land at his disposal, in what he terms joint venture with the owner who is from West Malaysia, the only factor, he considers limiting for vegetable production in his farm, is the quota of 50 immigrant labourers he is allowed to hire. Even worse, according to him, is that he cannot replace labourers who leave before the contract ends; he has to wait for the next round of recruitment.

For farmers who cultivate medium-sized farms the labour problem appears to be more in terms of management, even if they also complain about the cost. They have to strike a fine balance between the size of land they plant to vegetables and the number of labourers they employ, in order to come up with the most cost-effective combination. One farmer who cultivates 4.5 acres of his land says that his experience shows that if he cultivates more than this area, he will have management problems with the labourers. The ideal size for cultivation, however, is relative and would differ from farmer to farmer, depending on management abilities and intensity of vegetable production, among other factors. Another farmer, for example, says that hiring 9 labourers to cultivate 8 acres of his land, will give him only minimal advantage over cultivating 2 acres, using family labour. One other aspect of this management problem of deciding the land to labour balance has to do with apportioning the land to specific crops. If too large an area is planted to a certain vegetable, and they are ready to be harvested at the same time, the farmer should have enough available labour for harvesting at a specific time, otherwise the vegetables will just go to waste.

Among farmers cultivating smaller areas of land, which represent most of the farmers interviewed, the cost and the tediousness of the processing of papers are often cited as the constraints to hiring immigrant labour. It also appears that it is more of a potential problem; *i.e.*, if and when they decide to clear and cultivate their unopened land. Often, it is also associated with capital; a number of farmers equated their labour problems to not having enough money to pay for the passports, adding that there is enough labour to hire, if they could afford it.

6.3.2 Local Labour

In contrast, there is an agreement among almost all the farmers concerning the issue of local

¹ For practical purposes, and only for analysing labour problems, three categories of farms based on area of land under cultivation are arbitrarily designated: small farm = less than 5 acres; medium-sized farm = between 5 and 10 acres; large farm = more than 10 acres. This has no bearing whatsoever, on the total area of land owned by the farmers.

labour. That it is difficult to find local people to hire because they prefer jobs other than working on farms, seems to be a consensus. The reasons given however, are varied. Some say that local people find other jobs, like tapping rubber, more profitable, while others say that it is because the locals would rather work in their own farms. It also appears to be a common feeling that local workers are unreliable; they cannot be trusted, they leave their work when they feel like it. The farmers therefore, make use of local labour mostly for short, temporary jobs and for occasional help in their farms.

6.4 Farmers organisations

The farmers organisations mentioned by respondents during household interviews were KPD, Local Farmers Association (LFA) and the Federal Agriculture and Marketing Authority (FAMA). Apart from the KPD, unfortunately we did not have the possibility to look deeper into these farmers organisations, what they are and how they work.

Contract farming
KPD's main connection to farmers, with the exception of supplying water, is through contract farming which they actively promote. Contract farming is a co-operation between KPD and farmers where the task of KPD is to supply agro-chemical inputs and seeds and guarantee marketing, whereas the farmer must supply the land, which he must own, and labour. Contracts are based on single crops, at this time particularly mushroom and potato. KPD is paid back by subtracting their expenditure from the profit of the harvest (Group Manager of KPD, pers.comm.). KPD has predefined target groups, formulated according to KPD's aim of reaching the poor farmers.

Generally farmers within the area are aware of the presence of both KPD and LFA. FAMA was mentioned only by one informant. Approximately 1/3 of the interviewed households have, or have previously had, connections to either KPD or LFA. Of these, 6 farmers were, or had been, on a contract with KPD, for either mushrooms or potatoes. Besides this, each of the contract farmers grows various other vegetables on their own account. 16 households were, or had been, members of LFA. The farmers use LFA primarily for supply of inputs such as fertilisers and pesticides. The inputs are bought at prices corresponding to the market price, however inputs are delivered directly to the farm and therefore the farmer avoids transport costs. Security of delivery is generally mentioned as an advantage and some farmers also stated that LFA assisted with advice. A few of the farmers mentioned that they would like to receive help in marketing and water supply from the organisations.

The household interviews revealed that farmers who are not in contact with any of the

organisations either appear to disapprove of, or to be indifferent to the organisations. This is mainly because they do not believe that the organisations are able to benefit them in any way. A few even criticised that organisations were checking upon the farmer's use of pesticides. Some appeared more optimistic towards the organisations but simply did not know how these could help the farmers in their production.

KPD's intervention in agriculture in the Kundasang area is guided primarily by two aspects of their visions; to increase farm production and eradicate rural poverty. The latter results in the fact that only a narrowly defined and thus very limited group is reached, mainly chosen according to indicators of poverty. It is for the moment unclear if an increase in the agricultural production is limited because of KPD's narrow target group. More farmers might benefit from KPD's help if KPD broaden their target group definition, which might in turn lead to further increase of agricultural production. There might however be a problem of funding.

6.5 Water

Almost all of the farmers interviewed (56 out of 59) use irrigation for their production of vegetables. Our impression is that the majority of the farmers use sprinkler systems but a few of the farmers interviewed use more primitive means as a hose or bucket for watering. These were the poorest farmers with very small pieces of land. The 3 farmers who do not irrigate and rely only on precipitation seemed to be the very poorest of the farmers.

6.5.1 Water sources

The farmers are supplied with water for irrigation from by private intakes or by KPD's network, however, these two do not exclude each other. Most of the farmers who are connected to KPD's water supply supplement with private intakes (see chapter 4).

There are various reasons why the farmers depend on these different sources for water supply. Why farmers choose to be connected to KPD's network of water supply, or not, seems to be for partly geographical partly economical reasons. The geographical reasons are closely connected to the location of the fields. Some parts of the Kundasang area are not within reach of KPD's gravity fed network. Farmers with fields in these areas must necessarily depend on other water sources. The farmers who are within reach of the KPD network but choose not to use KPD do this because their fields are located near a private intake which can supply them with sufficient amounts of water or for economical reasons. According to several farmers in KPD network areas it is too expensive for them to be supplied by KPD. Among these some would prefer

being connected to the KPD network, the reasons being that the supply is more reliable. One informant mentioned that the KPD repair the water pipes when they break.

6.5.2 Problems in relation to water

The majority of the respondents in our sample expressed that they saw water shortage as a problem to some extent. In what way water is a problem differs from one farmer to the other and is closely connected to the seasons. Water appears to be one of the limiting factors for a good yield in the dry season and in the wet season too much rain may result in a reduction of the yields. The majority of the respondents in our sample expressed that they saw water shortage as a problem to some extent. In what way water is a problem differs from one farmer to the other and is closely connected to the seasons. Water appears to be one of the limiting factors for a good yield in the dry season and in the wet season too much rain may result in a reduction of the yields.

Almost all of the farmers interviewed expressed that water shortage in the dry season is a problem to a certain degree, while seven of the farmers say water shortage is a major limiting factor in their agricultural production. This difference in opinion when assessing the water as a limiting parameter for the agricultural production depends partly on the location of the farmers fields in relation to the KPD intakes or other water sources as this will control the amount of water available to them (see chapter 4).

The difference in opinion may also be because of dissimilarities in water demands. Factors like terrain, soil type, choice of crop, cropping practice and conservation methods will influence the water demand. When farmers who at present do not consider water shortage to be a problem were asked if water would be a limiting factor if they wanted to expand the area cropped there were also different answers.

Our impression is that lack of water in the dry season generally is a bigger problem than too much or too intensive rainfall in the wet season when considering the yields. However some farmers consider the latter as a problem.

One farmer said the following: "*the vegetables do not grow well due to weather changes*". When discussing weather many farmers refer to climatic changes and La Niña. La Niña is a climatological phenomenon bringing long periods with abnormally heavy rain (Brookfield et al., 1995). Heavy rain may result in erosion, drainage problems and plant damage which may give a reduction in yields. Heavy rain may result in erosion, drainage problems and plant damage which may give a reduction in yields. The measures taken to combat the problems

mentioned above were both discussed in the household interviews and noticed when walking in the fields. It appears that farmers are aware of many different kinds of conservation methods and that they implement these. Among the different conservation methods encountered were benching and terracing, construction of ridges, digging of drainage ditches, covering the soil and vegetables with plastic and building protective plastic roofs, so-called *kames*.

6.6 Market

Almost all vegetables produced in the area are sold at the local market in Kundasang. The process of marketing and selling is a complex system where middlemen play an important part. There are several levels of middlemen. The first level of middlemen, which will here be called *local middlemen*, may get the vegetables directly from the farmers fields with their own transport or they may buy from a farmer selling his produce at the market. The next level of middlemen buy from the *local middlemen* collecting larger amounts of produce which they then sell in bulk to a final level of middle men, the wholesalers from e.g. Kota Kinabalu or Sandakan. There may be several more levels in between. There seems to be some competition between the middlemen but not more than they still control the prices.

The farmers who bring the vegetables to the market themselves have two alternatives; they can sell directly to a wholesaler from Kota Kinabalu. or they can sell it to a middle man who will then pass it on. It is our impression that selling directly to wholesalers is rather time consuming so most of the farmers sell to *local middlemen* which means getting a lower price but making a faster deal.

Some of the interviewed farmers informed that they were working as middle men, but we do not know at which level. By two Filipino middle men who were followed in their usual round of buying vegetables at the market we were informed that most middle men are Chinese or Filipino. A few live in Kundasang but most come from Kota Kinabalu with their trucks everyday to buy vegetables in bulk (Filipino middleman, pers.comm.).

There are no real alternatives for the farmers but to sell their products in the markets in Kundasang or nearby towns. We have encountered only one farmer who did not sell via the local market. He was quite atypical having a very large farm producing only for export to Sarawak, peninsular Malaysia and foreign countries. In spite of these quite complex conditions at the market, only one of the farmers interviewed mentioned the market conditions as his largest problem. It seems that the local farmers have accepted that this is the way to do it. Fluctuations in the prices of vegetables were, however, mentioned by almost all farmers when

asked about the prices of vegetables. Only one farmer mentioned the unstable prices as his largest problem but many farmers considered unstable prices to be an annoyance. When questioned about possible solutions for the problem none of the farmers suggested any. A few farmers had tried changing their choice of crops in accordance with the most stable prices but this was not a solution as fluctuations affect all types of vegetables depending on the amount for sale in the market at any given time.

A possible way of solving this problem could be developing proper storage facilities. At the moment neither the market nor the individual farmer has any possibility for storing the produce and in that way bypass the fluctuations of prices.

6.7 Summary of findings

That shortage of labour is a pervasive problem among almost all of the 59 farmers interviewed is not surprising, considering that vegetable production is a labour-intensive type of agriculture. This is also reflected in the average size of land the farmers cultivate, which in general, is disproportionately small compared to the total land area they own. Additional labour is not likely to come from the local work force, but rather from the "import" of Indonesian migrant workers. This seems to be a real constraint because only a relaxation of the immigrant labour policies will be likely to ease the situation.

Water for irrigation is seen as a problem only during the dry season, and a minor one, at that. This will probably be so, as long as farmers still can find ingenious ways of supplementing the KPD water supply. There are no formal restrictions enforced as of the present, but this situation could change when the new plans for water management are implemented (see chapter 4). On the other hand water is more limiting for the poorer farmers who cannot afford the installation of private pipes from additional water sources.

Land, per se, is not a problem for the Bumiputra. Generally, they have more land than they can cultivate. But almost everybody aspires to acquire more land, not necessarily for agricultural expansion, but more as an investment or as inheritance for their children. It has not been investigated thoroughly how difficult it is for the Chinese farmers or for the Indonesian sharecroppers to find land to rent but it is evident that the land tenure laws to some degree pose a constraint for these non-Bumiputra farmers.

Only few of the farmers interviewed had any connection to the farmers organisations in the Kundasang area. These farmers bought agricultural inputs from the organisations or were

contract farmers for the KPD. Thus it seems that the farmers organisations at the moment do not play an important part in the agricultural activities in the area.

7. Tourism group results

In the following the findings from the 110 questionnaires (appendix 9) handed out in Mount Kinabalu National Park and 39 interviews, 6 key informants, 2 guides, 18 hotels, 6 restaurants, 4 shops, and 3 market stands, will be presented. Whenever possible the interview was conducted with the business owner or the manager, but in some cases it was not possible to meet these people and an employed was interviewed instead. This surely affects the accuracy of our findings, as the employees were not always able to supply us with the information needed and especially the economic figures are encumbered with inaccuracy. Where nothing else is noted the information given is based on the interviews (see appendix 10).

Whenever it is possible the results from the questionnaires and the interviews, will be compared in order to facilitate an analysis regarding the validity of the different findings. Regarding the questionnaires the findings are also compared with studies over the last few years initiated by the park itself. This is done in order to clarify to what extend our findings correspond to the park's.

Purpose

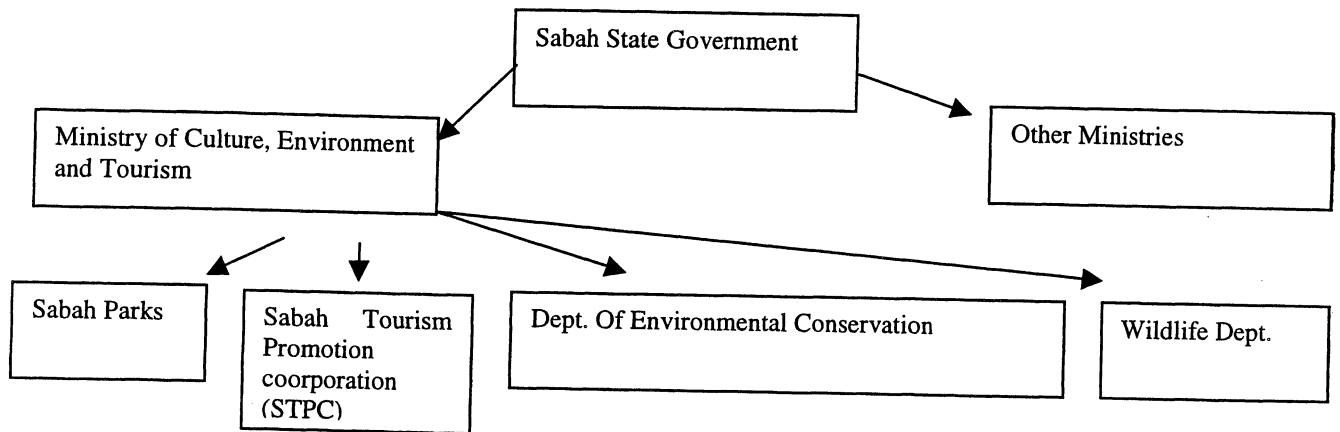
- To present the organisational structure of Sabah Parks and to provide an overview of the main businesses constituting the tourist industry in the study area: hotels, restaurants, shops, markets, guides and the golf course.
- Via interviews to estimate the number of people employed in the tourist industry.
- To estimate the overall expenditure of tourists. *→ spending*
- To estimate the average expenditure of identified different categories of tourist per day in local restaurants, shops and on local markets.
- To combine the above findings in order to analyse the overall economic impact of tourism in the area. Calculating the percentages of total expenditure that is trickled down to the local population mainly via wages will do this. *→ spending*

7.1 Sabah Parks and Mt. Kinabalu National Park

Sabah Parks is formed as a Board of Trustees consisting of ten governmental people². Sabah Parks is responsible for the administration, operation and conservation of the six national parks in Sabah. In addition to this they are responsible for research and education in relation to the

parks (figure 3). Sabah Parks has rented the national parks for a period of 999 years. The parks cannot be transformed into other land uses, except from mining fossil fuels or minerals if such are discovered (Wahab, pers. comm.). As a board of trustees Sabah Parks formulate their own guidelines and although submitted under the Ministry of Culture, Environment and Tourism, they are more or less operating without governmental intervention. For example Sabah Parks can keep subsidies allocated by the government although they at the end of the year may have an economic surplus (Kofoed, pers. comm.).

Governmental Institutions



Sabah Parks

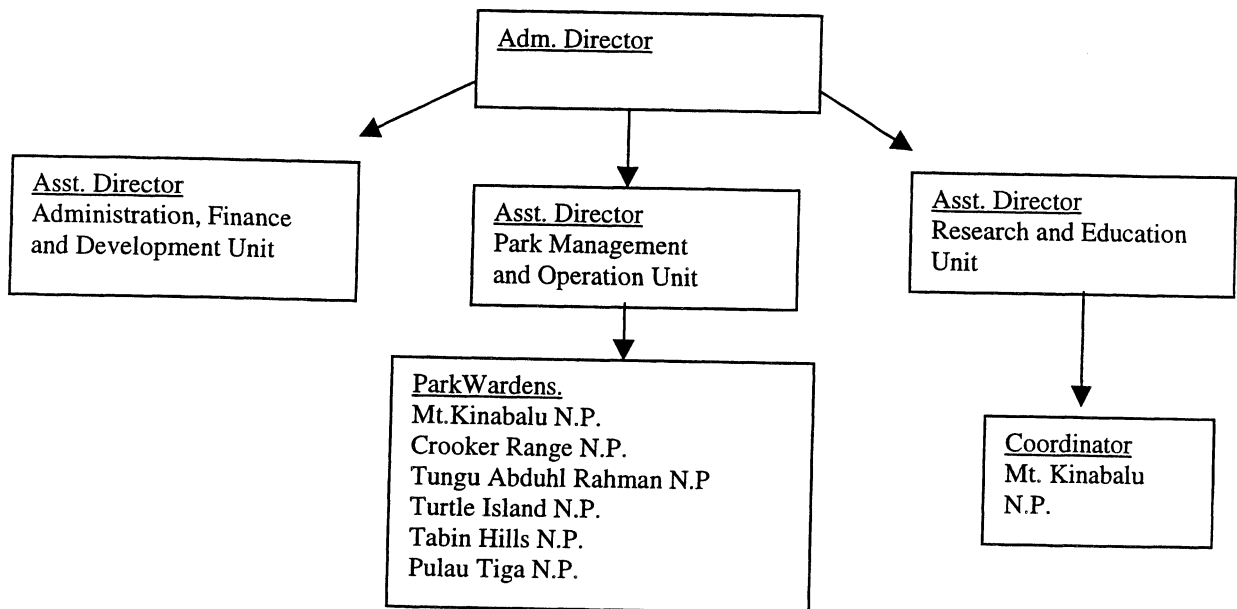


Figure 3: Governmental institutions related to tourism in Sabah and the structure of Sabah Parks. Source: Nais, 1998.

² Chairman, Deputy Chairman, Permanent Secretary from State Ministry, Permanent Secretary from Ministry of Finance, Secretary of Ministry of Natural Resources, Adm. Director of Sabah Parks and four ex-officers, Source Nais, 1998.

The three Assistant Directors are situated at Sabah Parks Head Quarters in Kota Kinabalu. The Administration, Finance & Development Unit is also situated in Kota Kinabalu and represents all six National Parks in Sabah. In each of these six National Parks there is a Management and Operation Unit headed by a park warden. In Mt. Kinabalu National Park the park warden is Mr. Eric Wong. The Research and Education Unit is based in Mt. Kinabalu National Park and coordinated by Mr. Jamili Nais.

The duties of the Management and Operation unit in Mt. Kinabalu National Park are manifold. They control the number of tourists entering the park and the number of mountain climbers. They are also responsible for search and rescue operations, protection of the park and maintenance of the trails (Wong, pers. comm.).

The Management and Operation unit used to administrate all accommodation in the park, but in April 1998 the accommodation was privatised, as a result of an objective by the State Government, and leased out to the Kinabalu Gold Resort (KGR) for a 30 year period (Lingam, pers. comm.). There was no public tender (Kofoed, pers. comm.). KGR, which is a shareholding company, pays a rent of approximately 400.000 RM a year to Sabah Parks. If KGR wants to expand the accommodation they must first get a permission from Sabah Parks (Wahab, pers. comm.).

In 1997 a professional survey of the park boundary was completed. It is now easy to locate the boundary, since the trees are marked and the undergrowth is cleared in a ten feet wide belt. Therefore encroachment is easier to prevent, as the clear boundary can not be questioned. Employed headmen of the surrounding kampongs are encouraged to report encroachments to the Sabah Park Headquarters. In return the headmen get either a money bonus or a diploma (Wahab, pers. comm.).

The summit trail is cleaned twice a week, because of littering from tourists. This and the sewage from the mountain huts are some of the major environmental impacts in the park, whereas hunting, which is illegal and the use of non-timber forest products (NTFP) are not problems (Wong, pers. comm.).

According to Nais the co-ordinator of the Research and Education Unit the expenses for administration, research, conservation and education are not fully covered by the income from the entrance fees, climbing fees, and income from leasing five resorts in Sabah to KGR (Nais, pers. comm.). The park is therefore dependent on funds mainly from NGOs and state subsidies (Wahab, pers. comm.).

It has been calculated that the Park's total income from tourism and KGR is 2.066.000 RM (see appendix 11). Also, the Park's expenses for salaries have been estimated to be 810.000 RM. Subtracting the salary expenses from the income generates a surplus of 1.256.000 RM. If Nais's statement is to hold then the variable costs would have to exceed this surplus which seems reasonable.

Another income source is through the shareholding-company Koktas. The shareholders are employees of Sabah Parks, and Koktas owns the restaurant at the Laban Rata Hotel (the last accommodation before the summit), the Balsam Restaurant and the souvenir shop in Mt. Kinabalu Park, and a souvenir shop in Kundasang. However, KGR will take over the restaurants and the souvenir shop in the Park by the end of 1998. Koktas also owns other tourist-related businesses in Sabah.

Mt. Kinabalu National Park provides jobs for about 90 locals of which 20 are park rangers (Wong, pers. comm.). About 30% are working with tourism-related jobs while the rest is working with research and conservation. The employees are paid approximately 500 – 1.000 RM a month plus medical and insurance, depending on their experience and education. Day workers are only paid 15 RM.

Sabah Parks is not interested in more climbers, as the carrying capacity of the summit, based on the amount of sewage water, is already reached. The carrying capacity of climbers is set by Sabah Parks to be 30.000 per year, even though the accommodation can sleep about 50.000 per year (136 beds). Most of the year the discharge of sewage from the mountain huts limits the carrying capacity to 30.000 climbers (82 per day). In the dry season the scarcity of water is the limiting factor, and only 50 people per day are allowed to climb (Wong, pers. comm.). Sabah Parks has no intention of raising the carrying capacity, although this would generate an income increase. This standpoint clearly states that Sabah Parks is more interested in conservation than in earning money. The fact that they have no intentions of extending the present trail system in order to attract more tourists also supports this statement (Wahab, pers. comm.). Sabah Parks wants to devote more resources and time on research and conservation. This comply with the policy statement contained in the National Parks Policy for Sabah, which is as follows:

The basic purpose of the National Parks system is to preserve for all time areas which contain significant geographical, geological, biological or historical features as a national heritage for the benefit, education and enjoyment of (mankind). (Liew & Nais, n.d.)

Mt. Kinabalu Park is promoted through Sabah Tourism Promotion Corporation (STPC) and

private agents at their own expenses (ADO, pers. comm., Kofoed, pers. comm.). Big events such as the Climbathon every October and the world cup in running October 1999 are the best promotion (Wong, pers. comm.).

7.2 The Golf Course

The golf course is situated on the Pinosuk Plateau, which until 1984 was part of the Kinabalu National Park. This area was degazetted in 1984 due the government's intentions of developing the area for agriculture and tourist purposes (AUR, 1984). Until now, the golf course is the only project fulfilled for tourist purposes, while other projects mentioned in The Sabah Park Master Plan (1992) have not been implemented. Many tourist projects in the area have been proposed, but the main reason was to attract government subsidies to the area, as stressed out by a key informant (anonymous).

The construction of the golf course was financed with government subsidies canalised through Sabah Parks Headquarters (Nais, pers. comm.), though Sabah Park has nothing to do with the administration of the golf course today. It is a membership club only for civil servants. The members can invest in the club by buying a piece of land for recreational purposes (e.g. building weekend cottages), that they are entitled to sell again later. At present, most of the land is already bought by the members, but only few cottages are built.

It was our impression, that the golf manager had no intention of promoting the club through agencies. The tourists visiting the club (400 per month) mostly come from hotels in the Kundasang area, which promote them selves (e.g. Zen Garden and Mountain View). Future plans for the golf course is to build a high-standard hotel and construction plans have already been made. But due to the economic crisis in Malaysia, the plans have for the time being been postponed.

In sum, what are the ^{local} economic spin-offs??

The golf course employs 40-day workers with a wage of 9 RM per day.

7.3 The hotel business

Eighteen hotels, providing 1824 beds, were recorded. Most of the hotels have been opened within the last 6 years and are situated along the main road between Kota Kinabalu and Sandakan. This rapid development in the hotel business is mainly due to the improvement of the road, which has reduced the travel time from Kota Kinabalu. Better road condition has increased the number of visitors, and thereby the economic potentials within the tourist sector.

During our survey most of the hotels were empty, which besides the low season was due to several factors that are mentioned below.

At present, there is an economic crisis in Southeast Asia, which has caused a decrease in the number of Malaysian and Asian tourists visiting the area. This has severe consequences for the tourist business, as most visitors coming to the area are Malaysians. Many hotel managers complained about the crisis. Also, the media attention about the widespread fires in Borneo and the recent hostilities in Kuala Lumpur has affected the number tourists, especially foreign tourists. Due to a decreased number of tourists this year (1998), the hotels have lowered their room rates with up to 40% in order to attract more customers. There are, however, certain hotels that show a high yearly occupancy rate of about 50-70% despite the crisis. These hotels have an effective promotion, arrangements with tour agents in Kota Kinabalu, and accommodate big groups of foreign tourist. Smaller hotels can not afford the desired promotion and they are therefore dependent on walk-in guests, who have no prior knowledge about the hotels. These hotels have occupancy rates of 10-40%. All of the hotels experience a high occupancy rate during school- and public holidays. Especially the Kinabalu Golden Resort (KGR) in Kinabalu National Park is fully occupied during these periods. The room rates range from 10-50 RM for the small and middle sized hotels and 50- 200 RM for the larger and higher standard hotels.

The Kundasang Motel and Resort Association was formed in July this year (1998) as recommended by the District Officer in Ranau. Most of the hotels are members. The association deals with issues like promotion, waste deposits and security. There are some disputes, however, especially regarding promotion. The competition between the hotels is very hard, and it is therefore difficult to promote the members in a way that satisfy everybody. Issues such as common price policies are not discussed in the association. However, it is our opinion that this would be appropriate, since a common price policy would reduce the losses of income experienced by the hotel business at the moment. A common price policy is namely expected to limit the price reduction throughout the members.

legal to
reduce
competition?

A license based on the approval of an EIA (Environmental impact Assessment) is formally needed to build a hotel, but this is currently not the practise. Many hotels are built without an approval from the District Officer and thus there is no proper control of the number and the environmental impacts of the hotels (Kofoed, pers. comm., ADO, pers. comm.). The lack of control seems to have jeopardised the whole hotel business in the area, because the number of hotels built have an over capacity in regard to the present number of tourists visiting the area. At present, the average occupancy rate is only 45% in the study area, which in the long run is

not a profitable situation. One of the aims of the Tourism Master Plan is to reach an occupancy rate of 70%. A better control of the number of hotels would in the end benefit the existing hotels with a better economy.

Many of the hotels are situated on land adjacent to the main road. In order to build on this land it is necessary to obtain a Temporary Occupancy License (TOL) which means that the government at any time can claim the land for extending the road. The hotel owners, however, do not see this as a constraint of future existents. Most of the hotel owners do not hold such a license. Despite the fact that many hotels neither have the permission to run a hotel nor the license to be situated where they are, the District Officer is considering to supply these hotels with permission in return for yearly fees (ADO, pers. comm.).

Only 4 of the 18 hotels are locally owned. Most of the hotels are on rented land or land bought by a joint venture between a Bumiputra and several non-Bumiputra. This is due to the fact that only Bumiputra can buy/achieve land. The most common way for non-Bumiputra to acquire land is to convince a local landowner to enter a joint venture project by contributing some land in return for provided capital. These joint ventures often favour the non-Bumiputra, because they normally have a greater experience in doing business (ADO, pers. comm.).

Only one hotel owner is fully dependent on the income generated by his hotel. All the other owners have other sources of income, such as farming, other resorts/hotels, or other businesses. This means that the hotel marked is distorted since non-profitable hotel businesses do not close but await the economic situation to improve. Should the economic situation improve most of the owners have plans to either renovate or expand.

The majority of the employees are locals. The hotels employ a total of 391 full time and 12 part time employees. The monthly wages range from 350-600 RM including accommodation and food.

All the hotels purchase vegetables from Kundasang, which can be seen as an economic multiplier effect from the tourist sector. However, the magnitude of this multiplier effect will not be further examined. Other goods are bought in Kota Kinabalu.

7.4 Restaurants

Only three of the restaurants, Balsam, Laban Rata, and Mt. Kinabalu, all located in Mt. Kinabalu Park, are dependent on tourism and thus interesting to our study. Restaurants situated outside the park, in Nabalu, Kundasang, and Poring Hot Springs, have shown to rely mostly on local customers, and they are not included in our survey. The three restaurants inside the park are all owned by Koktas, but one of them has been leased out to 10 shareholders (see section 7.1). In total the three restaurants employ 66 full time local personnel and the wages range from 50-500 RM a month, plus food and accommodation.

From the restaurant interviews it was not possible to get specific information regarding the tourists expenditure. Therefore a comparison with the tourist expenditure on local restaurants stated in the questionnaires can not be made, and thereby the validity of the questionnaires can not be examined.

7.5 Shops and Market Stands

The owners and the employees in the shops and on the markets are mainly locals and are mostly run by families. The shops and the local market people are not dependent on tourists as they have other incomes such as farming, construction work, and gardening. Only the shops selling souvenirs and market stands with an assortment that appeals especially to tourists (souvenirs, fruits, and nuts) derives the main proportion of their income from tourists.

Based on interviews the average daily income generated by tourists is ranging from 30 RM to 100 RM in the shops and from 50 RM to 600 RM in the market stands. We expect that a misunderstanding by some respondents, of the asked question can explain the large differences in the stated incomes. It seems like some of the respondents rather stated their daily sale than only the sale to tourist. The fact that the shop and market people were not able to distinguish between locals and Malaysian tourists probable caused this confusion.

7.6 Guides and Porters

In Mt. Kinabalu Park there is a total number of 60 guides, who are all local freelance workers, mostly guiding two to three times a week. In order to obtain a license the guides have to complete a training course with Sabah Parks. The license has to be renewed every year. There are, however, many guides working without a license. Tourists often complain that the guides

have insufficient knowledge about the Park or simply are unable to speak English. The guides are paid a fixed price of 50 RM per trip and upon that they are usually paid tips ranging from 0-30 RM per trip. Unfortunately we are not able to crosscheck this figure, as the questionnaires did not include a question about the tips paid. Guiding is an additional income, contributing with about 500-700 RM a month. The guides' main occupation is farming

Porters are also recruited among the local farmers. The kampongs take turns in sending porters to the Park. This is the best arrangement, as they have to attend their fields too. Porters carry luggage for the tourists and basic commodities for the mountain hotel/restaurant. They are paid approximately 2 RM pr kilo. The number of porters working within the park is not know and therefor porters will not be included in the further analysis.

7.7 Questionnaires

In order to illustrate how our sample fits previous findings some of the park statistics for 1997 and KGR's statistics for 1998 will be presented. In this regard it should be noted, that because of the privatisation of the park's accommodation the available statistics for 1998 are limited to the operating time of KGR. The statistics from 1997 and 1998 also differ in the layout and the graduation because KGR only incorporates tourists staying in the park, whereas the park statistics also include day visitors. This means that a number of biases appear and thereby render difficulties in establishing a general composition of tourists visiting the park across the years. The economic crisis, the forest fires and the selection of respondents are biases regarding our survey that will be considered in more detail later on.

As can be seen in appendix 2, where the park statistics are presented, the number of tourists that visit the park varies throughout the year. Comparing the number of tourists staying in the park in 1997 with 1998 a small reduction in the number is noted. In the table below selected months are listed together with some of our own findings.

As can be seen in table 4 our sample only reflects earlier findings when it comes to the division of tourists into day visitors and tourists staying the night in the park. The major difference between our sample and the park statistics regarding the division of tourists into the categories of Malaysian and foreign tourists can possibly be explained by certain biases.

Table 4: Presentation of different park statistics, KGR statistics and our own sample.

	September 1997 (Park statistics)		October 1997 (Park statistics)		September 1998 (KGR statistics)		October 1998 (Our sample)	
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)
Malaysian tourists	16.564	88	9.402	90	4.414	71	31	28
Foreign tourists	2.201	12	1.045	10	1.783	29	79	72
Total	18.765	100	10.447	100	6.197	100	110	100
Climbers	3.183	17	1.855	18	3.006	49	71	65
Non-climbers	15.5582	83	8.592	82	3.191	51	39	35
Total	18.765	100	10.477	100	6.197	100	110	100
Day visitors	11.137	59	5.413	52	/	/	51	46
Staying in the park	7.628	41	5.034	48	6.197	100	59	54
Total	18.765	100	10.477	100	6.197	100	110	100

The economic crisis has no doubt reduced the number of Malaysian tourists visiting the park. Maybe even made it more attractive to visit Malaysia for foreign tourists, given the crisis' positive impact on the foreign exchange rate. Certain hotel owners support this statement. Furthermore the selection of respondents, is believed unconsciously to have favoured the tourists who looked western. Maybe because it was expected to be easier to communicate with these tourists. The forest fires have just had an overall negative impact on the number of tourists visiting Malaysia. Given these arguments it is expected that the percentage of Malaysian tourists, who are visiting the park during our survey period, will be smaller compared to the previous year. Another and final explanation for why the foreign tourists are over represented in our survey, is that many Malaysian tourists did not enter our survey because they arrived by bus, which did not stop at the main entrance where the questionnaires were handed out.

Foreign climbers staying at the Laban Rata (mountain huts) filled out 20 of the questioners. This is a bias in itself because these 20 questionnaires in our sample cause an overweight of foreign climbers, compared to the actual composition of climbers regarding their nationality. Therefore if these questionnaires were disregarded reducing our sample to 90 questionnaires the following results would emerge (table 5) compared to table 4.

Table 5: Comparison of results according to the number of questionnaires entering the survey.

	Our sample (n=110)		Our sample (n=90)		Park statistics September 1997	
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)
Malaysian tourists	31	28	31	34	9.402	90
Foreign tourists	79	72	59	66	1.045	10
Total	110	100	90	100	10.447	100
Climbers	71	65	51	57	1.855	18
Non-climbers	39	35	39	43	8.592	82
Total	110	100	90	100	10.477	100
Day visitors	51	46	51	57	5.413	52
Staying in the park	59	54	39	43	5.034	48
Total	110	100	90	100	10.477	100

- The percentage of Malaysian tourists in our sample increases from 28% to 34% and foreign tourists are reduced to 66%.
- The percentage of non-climbers rises from 35% to 43% and the percentage of climbers included in our sample is reduced to 57%.

Of course this does not fully explain the still existing difference between our study and the park statistics, when it comes to the percentage of tourists who are Malaysian or foreign. Although the percentage of climbers in our survey is reduced as a consequence of the sample reduction there is still quite a difference compared to the park statistics.

Our 110 questionnaires were gathered over the period of 10 days and only accounts for about 3% of the expected number of tourists visiting the park in the same 10 days. Therefore it is obvious that a lot of biases and uncertainties have to be considered when trying to explain the differences in our sample compared to the park statistics..

7.8 Findings of the questionnaires

The data collected through the questionnaires are divided into two major groups, namely foreign tourist and Malaysian tourists. These two groups are further subdivided into four subgroups:

1. Foreign non-climbers
2. Foreign climbers
3. Malaysian non-climbers
4. Malaysian climbers

The number of tourists included in each category can be seen in table 4 since the following figures (4 to 9) are based on a survey sample of 110 questionnaires.

Figure 4 and 5 show the distribution of expenditure between foreign and Malaysian tourists. Compared with the foreign tourists the Malaysian tourists are represented more in the higher price categories (31-50 and >50), and less in the lower price-categories (0-10 and 11-30). Given these figures the Malaysian tourists have a higher expenditure during their holiday when visiting the local restaurants, markets and the shops. The calculated expenditure is for the foreign tourists in regard to markets and shops 17,6 RM and for the restaurants 30,5 RM. For the Malaysian tourists the expenditures are 30,5 RM and 34,6 RM respectively (for detailed calculation see appendix 11).

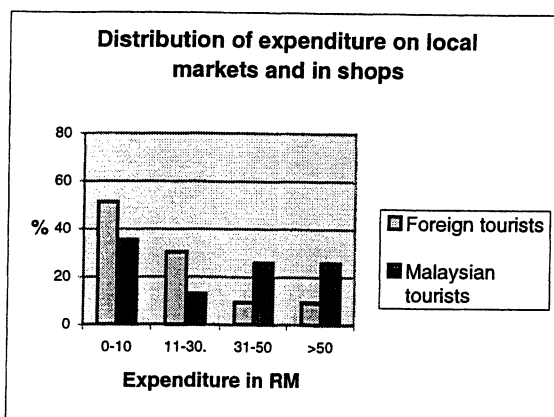


Figure 4: Expenditure on local markets and in shops by tourists.

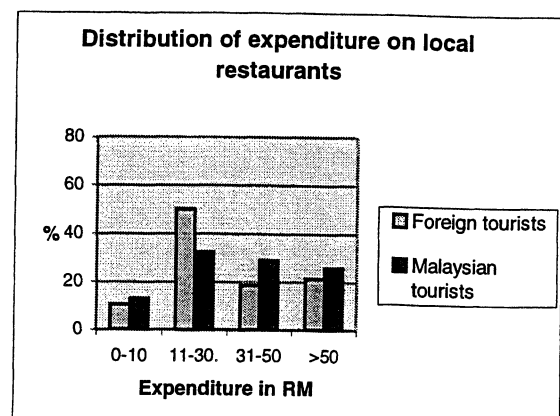


Figure 5: Expenditure on local restaurant by tourists

The most logical explanation of why the Malaysian tourists on average spend more money compared to the foreign tourists is that they belong to the better classes of society in Malaysia. Besides this one could argue that the main reason of the large difference in expenditure on the market is because of cultural traditions. The Malaysian tourists are to a larger extent familiar with purchasing goods at a local market. Further more, the kind of foreign tourists visiting the area are characterised by being adventurous and are mostly back packers who are not known for the size of their wallet.

When analysing the distribution of expenditure on local markets and in shops between foreign and Malaysian climbers (see figure 6), a similar picture appears. Malaysian climbers are again represented most in the higher price-categories, while the distributions of expenditure on local restaurants are the same for the two groups (see figure 7).

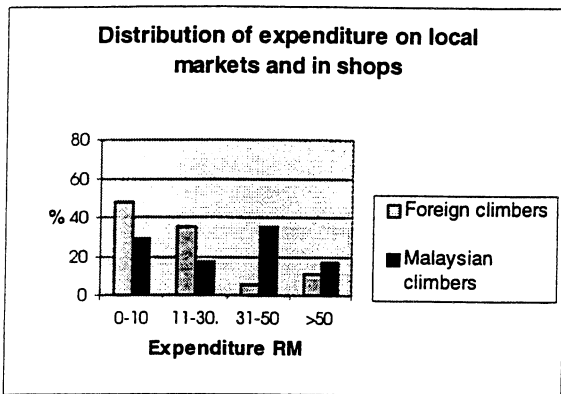


Figure 6: Expenditure of climbers on markets and in shops.

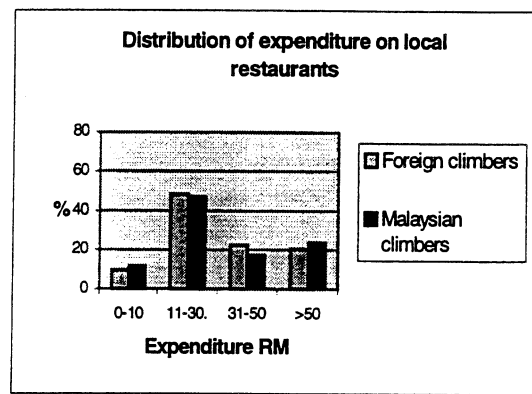


Figure 7: Expenditure of climbers on local restaurants.

Analysing the expenditure on local markets and in shops, shows that the Malaysian non-climbers are more represented in the highest category (>50) compared to the foreign non-climbers (see figure 8). When considering the expenditure on local restaurants the Malaysian non-climbers have again a higher expenditure compared to the foreign tourists in the same category (see figure 9).

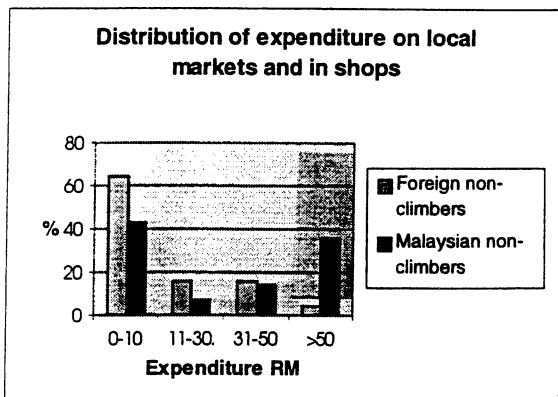


Figure 8: Expenditure of non-climbers on markets and in shops.

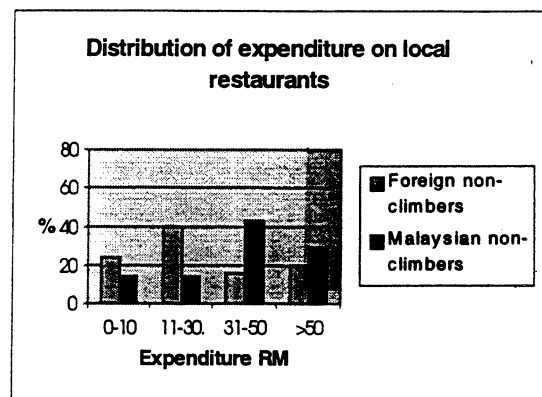


Figure 9: Expenditure of non-climbers on local restaurants.

From the above analyses it appears that the Malaysian tourists spend more money on average, but when it comes to the category of climbers there is no appreciable difference in the expenditure on local restaurants between different nationalities (figure 7).

The reason for categorising the tourists according to nationality and purpose of their stay was to examine what kind of tourists the tourist sector should focus on in their promotion if the highest expenditure is wanted. Another explanation for this classification is that the park statistics only differentiate between these categories and therefore only enables a comparison of our findings within these groups.

The analysis above is built upon data that not evenly distributed between the different categories of tourists. Table 4 shows that the data on Malaysian tourists are based on 31 questionnaires, while the data on foreign tourist contain 79 questionnaires. Therefore it can be discussed if the number of respondents within each category is sufficient to draw common conclusions regarding the size of expenditure. A further subdivision of the two major groups (Malaysian/foreign tourist) is probably even less accurate. This is especially true within the groups of Malaysian climbers and non-climbers, where the data is based on 17 and 14 questionnaires only.

The average foreign tourist is found to spend approximately 102 RM on average per day whereas the Malaysian tourist has an average expenditure of 119 RM (see appendix 11). These average expenditures cover expenses for accommodation, restaurant, shops and markets. The 25.000 foreign tourists expected to visit the area per year spend a total of 3.570.000 RM, given a average stay of 1,4 days. 32.320.000 RM is the total expenditure per year for the 194.000 Malaysian tourists expected to visit the area, again given an average stay of 1,4 days. This means that the tourist industry generates approximately 35.890.000 RM per year.

The accuracy of the total expenditure can be questioned. First of all it is not considered how big a percentage of the tourists that are children and therefore have a lower expenditure. Secondly using an average stay of 1,4 days per tourist regardless of nationality, does not take into consideration that most foreign tourists stay longer than 1,4 days and that Malaysian tourists mainly are day visitors. These biases all contribute to the statement that the yearly expenditure of tourists in the Kundasang area is less than 35.890.000 RM.

The total number of employees working in the tourist industry has not been possible to estimate. Therefore when calculating the percentage of the tourist expenditure that is trickled down to the local employees in this sector via wages the above expenditures have to be revised. It is known that 463 locals are employed in the tourist businesses covering hotels and restaurants. The turnover generated in these two businesses from tourists are on a yearly basis 26.991.000 RM. Based on interviews the total wage expense is set to be 2.559.900 RM per year (see appendix 11). This means that only about 10 % of the tourists total expenditure in these businesses are trickled down to the local people in the form of wages. Whether or not this is acceptable depends on the magnitude of other expenses that the owners also have to pay.

The economic benefit for other local people involved in the tourist sector (e.g. shops and market people) are more difficult to assess. These people have an additional income through

farming and therefore it has not been possible to quantify how big a proportion of their income that is generated from tourist related activities. However, it is important to note, that the tourists expenditure, in accordance to our calculation, on local markets/shops, is not to be neglected, because it accounts for about 25% of 35.890.000 RM which is the total tourists expenditure. How many people are involved in the sharing of this contribution has not been assessed, neither has the distribution been considered.

Assuming that the population in our study area is 6000, our findings show that approximately 10% are employed in the tourism industry as a whole (590 employees). This is based on the earlier mentioned 463 employees plus 60 guides and the 67 employed by Sabah Parks and the golf course (see appendix 11).

7.9 Summary of findings

Our study revealed an average ^{Hotel beds} occupancy rate of 45%. One of the aims in the Tourism Master Plan of 1996 is to reach an average occupancy rate of 70%. Given the total number of beds (1824, appendix 11) and an average stay of 1,4 overnights per tourist an occupancy rate of 70% would imply an increase in the number of tourists from 219.000 to 340.000. An increase of this size does not seem realistic given the present number and variety of tourist attractions. The conservation policy of Sabah Parks also seems limiting.

The Malaysian tourists spend more money compared to the foreign tourists and therefore it can be argued that the Malaysian tourists have a larger impact on the local economy. However, from a national perspective the foreign tourists are to be preferred, because their overall economic impact in Malaysia is determined by the facts that they travel for longer periods and contribute with foreign currency.

Based on interviews the employment level in the identified tourist businesses accounts for about 10% of the people living in the study area. Further more, it has been shown in selected businesses that approximately 10% of the total tourist expenditure is trickled down to the employees in the form of wages. Whether or not this is sufficient to justify the statement that the tourist industry is a major contributor to rural development seems questionable in this area. } ?