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**QUANTIFYING LEAKAGE OF TOURISM REVENUE: DEVELOPMENT OF
DESTINATION LEVEL STRATEGIES IN KAZIRANGA AND MANAS
NATIONAL PARKS**

**A thesis submitted in part fulfilment of the requirements
for the degree of Doctor of Philosophy**

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ABSTRACT

Tourism has been acknowledged by number of scholars and world bodies (Hill, Nel, Trotter; Hyfte 8; Alfredo 4; Sillignakis, Gopal, Varma and Gopinathan; UNWTO 1; UNO 16; World Bank 2) as a tool of economic development of a nation. However, critics argue that less developed regions are incapable of getting full advantage of tourism as the developed regions dominate the tourism business (Weaver 305; Walpole and Goodwin 560; Brohman 48; Lacher and Nepal, *Leakages to linkages* 78). Some scholars also argued that the economy of the peripheral areas adjoining to tourism destination is controlled by nearby economically developed regions (Lacher and Nepal, *Dependency and development* 948; Walpole and Goodwin 560). This leads to siphoning off of tourism revenue generated at the peripheral economy to the developed areas (Walpole and Goodwin 560; Sandbrook 125; Mbaiwa 158).

It is argued by a number of scholars that nature tourism and eco-tourism have the capacity to combat poverty of the people living in the fringe villages of the protected areas and national parks (Balmford, Green, Naidoo, Walpole and Manica 1; Zurc). These forms of tourism are believed to have low leakage compared to other tourism forms (Sandbrook 132; Lee 590). Consequently, it decreases the dependency of the local people on forest resources for livelihood. This is an important justification of the development of nature-tourism or eco-tourism around the national parks (Walpole and Goodwin 560; Goodwin 340). People living in the fringe and adjoining areas of national parks and protected areas depend on forest resources and jeopardizes the ecological balance of the area. In such a situation, tourism may be a beneficial option available to the population for livelihood (Walpole and Goodwin 560; Goodwin 340). Nature tourism based on protected areas and national parks offers means of generating direct revenues to the local community leading to conservation (Walpole and Goodwin 560; Goodwin 340; Lindberg et al. 546; Walpole, Karanja, Sitati and Williams 5).

However, the ideology of nature tourism based on national parks remains relatively untested in practice. A few studies have examined local benefits as part of a wider assessment of impacts (Lindberg et al. 554; Kim and Kim 50). Little detailed empirical work has been carried out in local level economy regarding local distributional

effects of tourism revenue in relation to nature based tourism. Lacher and Nepal (*Dependency and development* 959; *From leakages to linkages* 89) estimated leakage in some rural tourism destinations of Northern Thailand in two different studies. Walpole and Goodwin (569), and Sandbrook (130) also empirically showed how the tourism based on national park impact the surrounding villages of the national park. The present study has undertaken two national parks, both are world heritage sites (nature), Kaziranga National Park and Manas National Park as the study area. Whereas in Kaziranga National Park, the most popular tourism destination of Assam, tourism is matured and is the centre for mass tourism, in Manas National Park, tourism was introduced recently and tourism is still at the nascent stage. Thus, by doing empirical work simultaneously in two national parks of Assam, the present study has tried to find out how Tourism Revenue, Leaked Revenue, and Leakage Rate are different from one destination to another. Besides, on the basis of endowment of resources (both human and natural) in the respective National Parks, some destination level strategies are developed so that local community can get engaged in the tourism activity and are successful in retaining revenue within the destination economy.

Assam, one of the North-Eastern States of India, has very high potentiality of developing nature based tourism (Devi 183). It represents an important part of the Indo-Myanmar bio-diversity hotspot, which is included among the eight biodiversity hotspots (Dey and Sarma 342). Assam is endowed with exotic flora and fauna, five national parks out of which two are nature based world heritage sites, seventeen wildlife and bird sanctuaries, and two biosphere reserve (out of fifteen in India). Observing the high potentiality of nature based tourism, the Government has given priorities to promote tourism based on nature (Tourism Policy of Assam 4). The State Government spends millions of rupees for the development of tourism in Kaziranga National Park and Manas National Park (Department of tourism, Government of Assam), so that the local people living in the adjoining areas get benefits from tourism. But no studies have been undertaken whether such promotion of tourism helped the local residents or not.

To fill up this research gap, this study was proposed with an aim to find out degree of leakage in the destinations, to identify the causes of leakage and to propose local level strategies to check leakage, if necessary.

The study has been undertaken with the following objectives:

1. To identify the different categories of tourism businesses where revenue leakage occurs in Kaziranga National Park and Manas National Park
2. To quantify the approximate amount of revenue leakages from the above mentioned destinations.
3. To identify the causes of revenue leakage in the study areas.
4. To develop local level strategies to mitigate revenue leakage.

The methodology of the study was divided into six phases. In the first phase, the functional definition of Tourism Revenue (TR), Leaked Revenue (LR) and Leakage Rate were stated. The functional definition of TR and LR were adopted from the works of Sandbrook (128-129). He defined TR as the money which was spent by the tourists in the destination economy, either directly or indirectly through their tour operators. This excludes money paid by tourists to outside destination economy to the tour operator or tour agents and includes money which is spent in the study area. LR was defined as all tourism revenue which did not accrue to a local person either as payment for using goods and services or as profits to a locally owned business. The Leakage Rate was defined as $(LR/TR)*100$.

In the second phase, tourists' survey was undertaken. The main purpose of the tourists' survey was to classify the tourists' expenditure under different heads. As an outcome, the tourism business houses have been identified. All businesses present in the study area are not tourism related. Only those business houses of the study area were termed as tourism business where the tourists spend for satisfying their needs. From the survey of the tourists, their spending were classified as spending on lodging, food, jeep safari, elephant safari, boating, on tour guides, in souvenir items, in stationery items, and in smoking and liquor. This helped to identify the tourism businesses operational during the study period.

In the third phase, tourism business survey was undertaken. A census survey was undertaken to estimate the tourism revenue and leaked revenue of each tourism business (Sandbrook 127; *Dependency and development* 959; Lacher and Lacher. *From leakages to linkages* 87-88). TR of the study area was estimated by summing up tourism revenue

of all tourism businesses operational during the study period. LR of the study area was estimated by summing up leaked revenue of each tourism business.

In the fourth phase of the study, stakeholders' analysis was done for identifying the areas where the local people can get involved. The next step was formulation of strategies for minimizing tourism leakage. Suggestions by stakeholders and literature review were synthesized to formulate the strategies. In the final stage of the study, formulated strategies were tested by Expert Opinion survey for testing their practicability. The main strategies are discussed below in brief:

Major findings of the study are as follows:

- At KNP there were nine categories of tourism businesses viz. tour camps, restaurants, souvenir shop, wine shop, retail outlets, jeep safari, elephant safari, boating and tour guide. Except tour guiding business, all other categories of tourism businesses experienced leakage.

At MNP, there were three categories of tourism businesses viz. tour camps, jeep safari and elephant safari. All these three categories experienced leakage.

- The tourism revenue, leaked revenue and retained revenue at KNP were INR 211094380.00, INR 162844066.00 and INR 48250314.00 respectively and the leakage rate was 77.14%.

The tourism revenue, leaked revenue and retained revenue at MNP were INR 10439690.00, INR 4964405.00 and INR 5475285.00 and the leakage rate was 47.55%.

This amount is significant as compared to 90% estimated by Walpole and Goodwin (568), 15% to 61%, and 15% to 48% by Lacher and Nepal (Dependency and development 959, From leakages to linkages 89) and 78.5%, and 75% by Sandbrook (*Local economic impact* 24, *Putting leakages in its place* 124).

- Lack of capital and local ownership, lack of local employment, lower salaries to local employees, and lack of ability to link local resources to tourism were identified as the causes of leakage at KNP. Likewise, lack of capital and local ownership, lack of local employment, and lack of ability to link local resources to tourism were identified as major causes of leakage at MNP.

- Stakeholders suggested different areas of tourism related activities where the local people can get involved. On the basis of the stakeholders' suggestions and literature review, some strategies were developed those are compatible to the local situation and their practicability was tested through taking Experts' Opinion Survey.
- Stakeholders suggested different areas of tourism where local people can join tourism related activities. After the process of strategy formulation and practicability study, some local level strategies for Kaziranga National Park and Manas National Park were developed separately so that local people can participate in tourism related activities. Such strategies for Kaziranga National Park are starting home stay accommodation, positioning of local foods and beverages, positioning of local culture and tradition, promotion of local handicraft and handloom items as souvenir items, selling of local fruits and vegetables, starting of bullock cart safari, staffing from local sources in tourism businesses, and initiation of public private partnership business activity. The local level strategies developed for Manas National Park were starting of rural tourism, starting of accommodation run by local NGOs, starting of bicycle service, promotion of souvenir, promotion of local fruits and vegetables, starting of boating service, starting of guiding service, and initiation of Private-community partnership business activity.

The study attempted at developing local level strategies for the two national parks separately. Convergence of all the aspects attempted in the study is the contribution to the existing body of the knowledge.

The results of the study will be beneficial to policy makers. The present study is undertaken in the local level economy of two national parks separately. In strategy formulation, different areas where the local people can be engaged are identified on the basis of the availability of resources in the local level economy. Therefore, the strategies developed which are compatible to the local situation will be very helpful in policy making in the local level economy of KNP and MNP.

DECLARATION BY THE SCHOLAR

I, Birinchi Choudhury, Research Scholar in the department of Business Administration, School of Management Sciences of Tezpur University, Assam, hereby declare that this research work entitled “Quantifying Leakage of Tourism Revenue: Development of Destination Level Strategies in Kaziranga and Manas National Parks” is a bona fide work carried out by me under the supervision of Dr. Chandan Goswami. This work has not been submitted elsewhere for any other purposes.

Date: 04/04/2015

Place: Tezpur

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CERTIFICATE OF THE SUPERVISOR**TEZPUR UNIVERSITY**

This is to certify that the thesis entitled “Quantifying Leakage of Tourism Revenue: Development of Destination Level Strategies in Kaziranga and Manas National Parks” submitted to the School of Management Sciences, Tezpur University in part fulfillment for the award of the degree of Doctor of Philosophy in Business Administration is a record of research work carried out by Mr. Birinchi Choudhury under my supervision and guidance.

All help received by him/her from various sources have been duly acknowledged.

No part of this thesis has been submitted elsewhere for award of any other degree.

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LIST OF ABBREVIATIONS

- ATDC:** Assam Tourism Development Corporation
- DRDO:** District Rural Development Organisation
- DTH-TV:** Direct to Home Television
- GDP:** Gross Domestic Product
- KNP:** Kaziranga National Park
- LR:** Leaked Revenue
- MEWS:** Manas Ever Welfare Society
- MMES:** Manas Maouzigendri Eco-tourism Society
- MNP:** Manas National Park
- NEDFi:** North East Development Financial Corporation
- NGO:** Non Governmental Organisation
- INR:** Indian Rupee
- IIE:** Indian Institute of Entrepreneurship
- IUCN:** International Union for Conservation of Nature
- PPP:** Public Private Partnership
- RR:** Retained Revenue
- SECOLA:** Sabyinyo Community Lodge Association
- SHG:** Self Help Group
- STEP:** Sustainable Tourism Eliminating Poverty
- TR:** Tourism Revenue
- UNEP:** United Nations Environment Programme
- UNESCO:** United Nations Educational Scientific and Cultural Organisation
- UNWTO:** United Nation World Tourism Organisation
- WTTC:** World Travel and Tourism Council
- WWF:** World Wide Fund for Nature

CHAPTER I

INTRODUCTION: PROFILE OF THE STUDY

Tourism has become a popular global leisure activity. According to the report of United Nation World Trade Organisation (UNWTO 2) in 2011, there were over 983 million international tourist arrivals worldwide, representing a growth of 4.6% compared to 940 million in 2010. International tourism receipts grew to US \$ 1.03 trillion in 2011, corresponding to an increase in real terms of 3.8 percent from 2010. Besides the developed countries, tourism has become vital for many developing nations too. China and Malaysia have reached the top 10 most visited nations of the world in 2011 (UNWTO 6). In many developing countries, tourism is the most viable and sustainable economic development option and the main source of foreign exchange earnings (UNWTO 1). In the countries like Vanuatu, Maldives, Bahamas, Barbados and San Marino, tourism contributes more than 50 percent of their GDP. Of course, India, Bangladesh, Burundi, Cameroon, and Haiti receive even less than 5 percent of their GDP from tourism trade (Bhuyan 2).

Tourism plays an important role in economic development and creation of jobs in India. The Planning Commission of India estimated that 78 jobs per million rupees of investment are created by the tourism sector. The planning commission has identified tourism as the second largest sector in providing employment opportunities for low-skilled and semi-skilled workers (Ministry of Tourism, Government of India 1). However, the percentage share of India in international tourist arrival has been around 0.5 during 2006 to 2009 and the share of tourism revenue receipts has been slightly above 1% in the same years (Stark Tourism Associates). However, against such dismal scenario, there are some prospects as well. Tourism in India is the largest service industry, with a contribution of 6.23 percent to the national GDP and 8.78 % of the total employment in India. In 2011, total foreign tourist arrivals in the country were 6.18 million (Table 1.1). India generated about 200 billion US dollars in 2008 and that is expected to increase to US 375 billion dollars by 2018 at a 9.4 per cent annual growth rate (Ministry of Tourism, Government of India 5). For every INR 1 million of investment, the number of jobs created in India is 18 in manufacturing sector, 45 in

agriculture, and 78 in travel and tourism (Ministry of Tourism, Government of India, 1). The number of foreign tourist arrival in India increased from 5.78 million in 2010 to 6.18 million in 2011, registering a growth of 8.9 per cent. (Sahai 1)

Table 1.1: Tourists arrivals in World and in India (in millions)

Year	World arrivals	Arrivals in India
2001	683.4	2.54
2002	703.2	2.38
2003	691.0	2.73
2004	762.0	3.46
2005	803.4	3.92
2006	846.0	4.45
2007	894.0	5.08
2008	917.0	5.28
2009	880.0	5.17
2010	940.0	5.78
2011	983.0	6.18

Source: Tourism Highlights, UNWTO, 2012

Despite having ample tourism resources, the tourist inflow into Assam is hardly encouraging. In the recent years, the Government of Assam has undertaken different strategies to attract tourist into the State. In 2008, the State Government declared its Tourism Policy giving tourism high priority in the economic development of the State. The Assam Vision 2025 projected that by the end of 2025, tourism business turn-over would be over worth INR 1360 billion providing employment to 1.01 million persons in the State. It also targeted to have 2.7 million domestic tourists and 30000 foreign tourists by 2025.

Though tourism is being given priority everywhere, the full benefits of tourism do not always reach the host economy due to leakage. According to the United Nations Environment Programme (UNEP) this leakage occurs in terms of taxes, imports, and profits and wages paid to the people staying outside the tourism destination. The problem of leakage is more serious in case of the developing countries compared to that of developed countries. Due to the existence of heavy amount of leakage, the developing countries are incapable to capture the maximum benefits of tourism.

Observing the benefits to the local economy and the environment, some scholars advocated promotion of nature based tourism based on national parks and wildlife heritage (Walpole and Goodwin 160; Goodwin, 288; Valentine 107; New South Wales Taskforce on Tourism). Tourism that features nature is generally termed nature based tourism; a broad term that covers a range of tourism experiences including adventure tourism, ecotourism, and aspects of rural tourism (Tourism Western Australia). In its broadest sense, nature tourism involves experiencing natural places, typically through outdoor activities that are sustainable in terms of their impact on the environment (Tourism New South Wales). These can include everything, from bushwalking and adventure tourism experiences to sightseeing, scenic driving, beach experiences, and wildlife viewing. By the term nature based tourism, Laarman and Durst (43) referred to a style of tourism which combines education, recreation and adventure. Boo (as quoted in Valentine 108) defined nature based tourism as travelling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations. The nature based tourism can be termed as environment-friendly travel (Borst, as quoted in Valentine 108) and sustainable tourism (Lane, as quoted in Valentine 108). Valentine defined nature based tourism in a more simple way, "Nature based tourism is primarily concerned with the direct enjoyment of some relatively undisturbed phenomenon of nature" (108).

Nature based tourism helps in both conservation and sustainable development (Walpole and Goodwin 560). The argument of Goodwin (288) regarding nature based tourism and benefits of conservation and local residents is relevant here:

Low impact nature tourism contributes to the maintenance of species and habitats either directly through a contribution to conservation and /or indirectly by providing revenue to the local community sufficient for local people to value, and therefore protect, their wildlife heritage as a source of income. (288)

Tourism in national parks has some important benefits. It increases the local people's income and hence the local community gets motivated to protect wildlife and

habitats (National Parks: Britain's Breathing Spaces). Thus, tourism in national parks is developed for conservation purpose. If the local community living in the adjoining or fringe villages of national parks gets benefits from tourism, they will protect the wild animals and resources themselves. If tourism does not benefit local community they may not be interested for conservation and may not reduce their dependence on forest resources for livelihood. The argument of Ahsan (132) is significant here. He believes that if the residents bear the cost without receiving benefits, they may turn against conservation, and may intentionally and unintentionally damage the site. Therefore, it is very important to study how much nature based tourism benefits the local residents. It is possible only when we study the impact of tourism on local economy based on fringe villages of national parks. Thus, if we broaden the definition of local economy by including the rural gateway towns or the complete region as a whole, we will not be able to diagnose the actual benefits the local residents living in the fringe villages receive.

Assam has very high potentiality in nature based tourism (Devi, 183). She is famous for her unique physiological beauty with flora and fauna, different tribes, five national parks out of which two are nature based world heritage sites, seventeen wildlife and birds sanctuaries, and two biosphere reserves (out of fifteen in India). Observing the high potentiality of nature based tourism, the state government has given priorities to promote tourism based on nature (Tourism Policy of Assam 2008 4). The State Government spend millions of rupees for the development of tourism in Kaziranga National Park and Manas National Park so that the local people living in the adjoining areas gets benefits from tourism which in turn will lead to conservation (Department of Tourism, Government of Assam). Nature based tourism is prone to leakage for which it is important to examine how much tourism has benefited the people living in the adjoining areas of the national parks.

This study has been undertaken in the adjoining villages of Kaziranga National Park (KNP) and Manas National Park (MNP). There are basically two reasons of choosing the two destinations. Researchers believe in the concept of "high revenue-high leakage and low revenue-low leakage". This means that tourism destination with higher revenue has high leakage and tourism destination with lower revenue has low leakage (Lacher and Nepal, *Dependency and development* 953, *From leakages to linkages* 88;

Weaver, *Alternative to mass tourism* 428). KNP has been generating far higher amount of tourism revenue compared to MNP. In this situation, the present study will help to verify empirically “high revenue-high leakage low revenue-low leakage” statement in case of KNP and MNP too.

Secondly, tourism is established in KNP and it is in the infancy level in MNP. It is reflected by the number of visitors coming to the destinations and revenue generated. It is argued that as the number of visitors to a destination increases, it becomes more prone to revenue leakage (Meyer 26). Since KNP is the most visited tourism destinations of Assam, tourism to this destination is established. Hence it is important to check whether leakages in KNP and MNP are different.

The common thing about KNP and MNP is that both are world heritage sites and both are related to wildlife tourism. Considering all these things, it is important to find whether there is any difference in the leakage rate in the national parks.

Thousands of tourists come to see the important species of wildlife of KNP and MNP and, therefore, millions of rupees are generated through tourism. But the important factor to be studied is whether the local residents are benefited from that tourism revenue or not. The present study has taken this issue and tried to estimate tourism revenue, leaked revenue, and retained revenue and to formulate some concrete strategies so that the tourism revenue can be retained within the local economy of the tourism destination if the leakage is found to be high.

The thesis is broadly organized into six chapters. In Chapter I, a background concept of the present study, the rationale of the study and a brief description of each chapter is provided. In Chapter II, an extensive literature review is presented. Through the literature review, the conceptual framework of the topic was formulated. In Chapter III, the research gap was identified. For fulfilling the research gap four objectives were formulated in Chapter III. The objectives included identifying the tourism businesses of the study area where tourism leakage occurs, quantifying leakage, identifying causes of leakage, and developing local level strategies to reduce leakage. A description about the geographical area where the research has been undertaken is also described in Chapter III. The methodology was designed to fulfill the objectives and it is included in Chapter IV. In the methodology, the workings of Lacher and Nepal (*Leakages to linkages* 87-89;

Dependency and development 954-956) and Sandbrook (*Putting leakages in its place* 127) have been taken as references. As in the working of Lacher and Nepal, and Sandbrook, a census survey of all tourism businesses operational in the study area was undertaken in this study.

In Chapter V, the sectors where tourism leakage occurs are described. Besides, the estimated amount of tourism revenue, leaked revenue and retained revenue are described in this chapter. The causes of the revenue leakage identified in the study areas are also described in this chapter. This chapter also includes the stakeholders' suggestions and strategies proposed on the basis of the experts' opinion for minimizing leakage. Chapter VI is the concluding chapter of the thesis. This chapter gives a brief description of the whole work. This chapter also highlights the contribution of the study to the body of knowledge, to policy, and areas of further research.

Like other studies undertaken by Walpole and Goodwin (563-565) and Sandbrook (*Putting leakages in its place* 127-129), the present study has also estimated leaked revenue by doing census survey. While the other studies quantified leakage in a single national park, this study has compared and contrasted two national parks of Assam: KNP and MNP. Though both are world heritage sites, the tourism scenario is not similar in the two national parks. KNP is the highest revenue generating destination, and MNP is a low revenue generating destination. Moreover, whereas KNP is a matured tourism destination, the tourism of MNP is at infancy level. By choosing the two heterogeneous destinations, the present study wanted to analyse how leakage differ from one destination to another and what are the causes responsible of such leakages. Whereas the previous studies (Sandbrook, *Putting leakages in its place* 131; Lacher and Nepal, *Dependency and development* 959, *From leakages to linkages* 89; Walpole and Goodwin 569) estimated leakage only the present study has not only estimated leakage but also developed some destination level strategies to minimise leakage on the basis of availability of resources in the destinations. Convergence of all is the novelty of the present study.

The results achieved in the study will be beneficial to the policy makers. Most of the previous studies were undertaken in the national or international scale. Those results cannot be applied for the development of local level economy specially based on

National Parks. Since the present study is undertaken in the small scale local level economy of National Parks, the results of the study can be utilized for future tourism planning and development of local level economy of National Parks. In strategy formulation, different areas where the local people can be engaged are identified on the basis of the availability of resources in the local level economy. Therefore, the strategies developed which are compatible to the local situation will be very helpful to policy formulation for the local level economy of KNP and MNP.

CHAPTER-II

**REVIEW OF
LITARATURE**

CHAPTER II

REVIEW OF LITERATURE

2.1 Tourism and development.

According to Boz (200), tourism industry generates substantial economic benefits to both host countries and tourists' home countries. Tourism primarily helps a country to earn foreign exchange and to pay for their imports and to repay foreign debt. Additionally, it provides jobs to local people especially to semi-skilled youths. Tourism is relatively labour intensive industry, employees diversified skills from accountants and hair dressers to tour guides and tracker. Number of scholars viz. Lanza, Temple and Urga (315), Samimi, Sadeghi, and Sadeghi (28) and Fayissa, Naiah, and Tadasse (1), Nyaupane, Morais, and Dowler (1383) advocated tourism for its developmental impact on the economy.

United Nation World Tourism Organisation (UNWTO) argued that tourism is equally important for the economy of a country like oil exports, food products or automobiles. It has become one of the major players in international commerce. Accordingly, it is the main income source for many developing countries. Tourism has become a significant source of foreign exchange revenues for many countries of the region, including some least developed countries (United Nations 4). Because of its tremendous contribution to income and employment, UNWTO introduced a programme viz. Sustainable Tourism-Eliminating Poverty (ST-EP) in 2002 (Dimoska 175).

Tourism industry contributes significantly to economic growth, employment, and reduction of poverty in countries that suffer from high rates of unemployment, low level of per capita GDP, and in countries that face stiff competition in the international market (Samimi, Sadeghi, and Sadeghi 29). Besides the increase of gross national product and personal income, tourism increases full time and part time jobs, and provide tax revenue for the host country (Sinclair 2). According to Ige and Odularu (71), tourism is a major economic activity in terms of income and employment generation, foreign exchange earnings, and interchange of cultures and people. Aref and Redzuan (208) argued that tourism plays an increasingly important role in the development of host communities. It increases employment opportunities for the local people, and contributes to income and

standard of living (Gu and Rayan 642; Dyer, Gursoy, Sharma, and Carter 415). Employment generation, foreign exchange earning, and community welfare are the major contributions of tourism (Andriotis 333). According to Kwan and McCartney (186), tourism brings in new business and improves opportunities. According to Binns and Nel (236), the emergence of tourism as a leading economic activity in recent decades is undisputed. Goodwin (*Local community* 355) argued that tourism brings development to the locality. According to him, for the development of the locality involvement of local community in tourism activities is important.

Dimoska (173-174) recorded that tourism is very important for development of developing countries, especially for development of the least developed countries. He advocated tourism for 7 mechanisms through which tourism provides benefits to the local economy. The mechanisms he put forwarded are:

- Employment of the poor in the tourism sector
- Supply of goods and services to tourism sector by the poor
- Direct sales of goods and services to the tourists by the poor
- Establishment and running of micro, small and medium sized enterprises or community based enterprises.
- Impose of tax or levy on tourism income for the spending on the interest of the poor.
- Voluntary support by tourism enterprises and tourists.
- Tourism stimulates investment in infrastructure which helps the locality.

Samimi, Somaye, and Sadeghi (28) also argued in the same line. According to them, tourism not only increases foreign exchange income, but also creates employment opportunities and stimulates economic growth. Tourism can be used as export oriented economic growth strategy which brings jobs and development to the people and help in the reduction of abject poverty (Fayissa, Nsiah, and Tadasse 2). It is a valid and indispensable tool for sustainable development (Zamudio 4).

While these works succeeded in focusing the beneficial picture of tourism, literature is also available which highlighted failure of tourism to promote local economic development and livelihoods of local people (Lacher and Nepal. *Leakages to linkages* 78:

Lacher 2; Lindberg, Enriquez, and Sproule 553; Weaver, *Peripheries of the Periphery* 305; Walpole and Goodwin 560; Mbaiwa, *Enclave Tourism* 159; Brohman 48; Leong 39; Levitt and Gullati 328; Dwyer and Forsyth, *Measuring the benefits* 228; *Economic significance* 397; Roe, Leader-Williams, and Dalal-Clayton 15). This failure is often common in the peripheral areas of developing countries for which these countries failed to take the full advantage of the tourism industry. This happens because the less developed regions have to import goods and services used in the tourism industry. These economies lack capital to create substantial businesses and skilled human resources to gain upper level employment (Lacher and Nepal, *Leakages to linkages* 79). This lack of local involvement results in high amount of revenue leakage that hinders the economic development of those countries.

2.2 Tourism revenue leakage:

Tourism leakage, in its general term, is the part of the tourist expenditure that leaks out of the economy of the host country (Gu 21). Kim and Kim (54) defined that leakage is a kind of decelerator which removes the part of the revenue generated by tourism. According to them, level of local tax, the propensity to save of the residents, and propensity to import are the causes of leakage. It is the payment made outside the destination economy (Boz 200). He argued that it is the portion of the total holiday price that does not reach or remain in the destination economy.

Mowforth and Munt (186) defined leakage as consisting of three elements:

- Purchase of imported goods and services by tourists;
- Import of goods and services by hotels and other tourism establishments; and
- Repatriation of profits by foreign owners of hotels and other services.

According to Hemmati and Koehler, leakage is the amount of the revenue arising from tourism in a destination country that are not accessible for consumption or reinvestment in the same country. Meyer (*Caribbean Tourism 6: Pro-poor tourism* 561) also used the term leakage to describe the percentage of the price of the holiday paid by the tourists that leaves a destination in terms of imports or expatriate profits. Davidson (159) refers to tourism leakage as tourism profits drained away from the local economy to

other countries through profits reaped by foreign owners and repatriated to foreign countries, imports of building materials for the construction of tourism infrastructures, and imports of food, drink, and foreign labour to facilitate day to day tourism transactions. According to Benavides (8), leakage is a process by which part of the tourism revenue repatriated in the form of profits, income and royalty remittances, repayment of foreign loan, and import of equipment, materials, capital and consumer goods.

Ryan (159-160) argued that leakage is the part of tourism revenue in terms of savings, taxation, and imports. He stated that

The leakages in the system are savings, taxation and imports. The act of saving withdraws money from the economy, and diminishes overall levels of demand for goods and hence employment. Savings become useful only when used by financial intermediaries to fund investment. The same is true for taxation. By raising taxation, the government withdraws money from the economic system, and so, again diminishes levels of demand. It is only by government expenditure that that money is released back into the economy. Imports are a leakage in the sense that by purchasing from overseas, the jobs associated with the production of those goods are also to be found overseas, funded by the expenditure of the importing country (159-160).

The United Nations Conference on Trade and Development (9) defines leakage as the process whereby part of the foreign exchange earnings generated by tourism, rather than reaching or remaining in tourism-receiving countries, is either retained by tourist-generating countries or other foreign firms. In this definition it is argued that even money that never reaches the destination is considered as leakage. The United Nation World Trade Organisation (as quoted in Lange 18) lists the following types of expenditure on imports as the main causes for leakage:

- Imports for materials and equipment for construction.
- The import of non-durable goods such as food and beverage
- Repatriation of income obtained by foreigners

- Repatriation of profits obtained by foreigners
- Interests paid for foreign loans
- Marketing expenses abroad

The above literature study indicates that leakage is defined from the point of view of national scale or international scale. Most of the studies that evaluated tourism leakage took into consideration external leakage, structural leakage, financial leakage or capital leakage, and pre-leakage or invisible leakage. These kinds of leakages may be meaningful or significant when economic impact of tourism is discussed in national level or international scale. In such a case, some macro methods such as input-output analysis or multiplier analysis are used. But such large scale techniques are inappropriate for local level inquiries where significant data are often unavailable (Belisle 499; Kotke, *Application of linear programming model* 6; Lacher and Nepal, *Dependency and development* 955; Ryan 195 ; Smith 9; Sandbrook, *Putting leakages in its place* 127; Walpole and Goodwin 563).

The works done by Lacher and Nepal (*Dependency and development* 963; *Leakages to linkages* 77), Mitchel and Ashley (1), Sandbrook (*Putting leakages in its place* 124), and Walpole and Goodwin (559) have given another angle of thought about the leakage of tourism revenue. It is seen that the study of impact of tourism on local level economy or village level economy is also very much important specially when we discuss about the economic benefits from rural tourism or nature tourism based on national parks, heritage sites or protected areas. When we have to analyze the benefits achieved by local communities from nature tourism, the economic analysis based on regional to international scale does not help since these analyses do not cover the impact on local community. For making economic development of the local communities of such small area through tourism, such type of macro studies do not help the policy makers. Examples are also found where exaggerated leakage rate found in macro study influenced policy makers in adoption of wrong policy (Lea 40-41). In that situation, a local level study is more suitable for policy making for the development of local economy through tourism. In this situation, the comment of Mitchell and Ashley (1) is relevant:

Some respectable organizations have cited research that 75% of the benefits of tourism 'escape' the host country and ends up in the rich source countries through what is termed as 'leakages'. Unfortunately for the poor in developing countries, these figures are generally based on flawed arithmetic, and can be unhelpful to policy makers trying to improve the impact of tourism on the poor (1).

Mitchell and Ashley (1) argued that calculations of leakage often include spending on external items such as marketing, insurance, retailing, packaging or international flights which could not possibly have been provided by the destination economy. This results in overstated leakage rates which do not accurately reflect conditions within the host economy. In estimation of leakage, the payments made for goods and services that are not provided by the destination economy should not be included (Mitchell and Ashley 1). Therefore, to narrow down 'leakage' to the destination, Sandbrook (*Putting leakages in its place* 128) defined Tourism Revenue as the money which was spent by the tourists in the study area, either directly or indirectly through their tour operator. "This eliminates money paid by tourists to tour operators which was subsequently spent on other elements of the holiday or retained as profit, as this money was never present in the study area and is therefore not considered relevant for calculation local leakage" (Sandbrook, *Putting leakages in its place* 128).

Considering this view of tourism leakage, a number of empirical studies have been done on local level economy by Lacher and Nepal (*Dependency and development* 947; *From leakages to linkages* 77), Sandbrook (*Putting leakages in its place* 124), and Walpole and Goodwin (559). According to them, tourism leakage is the part that is spent for imports of goods and services, wages and salaries paid to non-local employees, and profits of the non-local tourism business. They argued that the retained revenue is a part of the total revenue that remains in the destination as the income of the local people in terms of goods and services provided, wages and salaries, profits, and other kind of income.

2.3 Kinds of leakage:

Depending on the nature of expenditure by the operators in the tourism industry, different scholars have categorized leakage in different groups. These categories of leakage are discussed below.

Previous studies on tourism leakage have focused on leakages occurring during tourism construction and operation, from imports of building materials, equipments, food and beverage to fees paid for overseas advertising and marketing. Davidson (159) pointed out four types of leakage. They are:

- The construction materials for tourism infrastructures imported from other countries;
- The profits from tourism operation leaking abroad to the owners of tourist facilities;
- Imports of food, drink, and manufactured goods to meet the demand of inflexible tourists; and
- Wages paid to foreign workers and not spent in the local economy.

According to Kim and Kim (54), wages given to employees living outside the region, import of raw materials, import of goods and services consumed by the tourist or tourist sectors (e.g. hotels, restaurants etc.), and local taxes are the main causes of revenue leakage for the poor and small periphery. They argued that the bigger and more prosperous the country is, the greater the chance that the country will benefit from the development of tourism due to less tourism leakage. Brown (239) examined revenue leakage in terms of expenditure on imports of manufactured goods and capital goods, payment on interest, payment made to tour operators and travel agents abroad, taxation on income etc.

Mill also argued in the same line about the classification of the leakage. According to him, leakage occurs through six different mechanisms. These are

- Imports of goods and services including raw materials used to make tourism related goods such as souvenir;
- Infrastructure viz. construction of hotels, airports etc.;
- Foreign factors of production in terms of foreign investment, foreign agents;

- Promotional expenditure in advertisements and publicity in foreign countries;
- Transfer pricing in terms of reducing taxes or other duties for businesses owned by foreigners; and
- Tax exemption to foreign investors.

According to Vaugeois (9), there are six forms of leakage or leakage resulting due to six factors:

- **First**, the costs of imports of goods and services to meet the demand of the tourists. For example, if the tourists want to consume food that is not produced domestically, the destinations have to import it from other places.
- **Secondly**, when the destinations have to purchase construction material and equipments from other countries to develop of tourism infrastructure, leakage occurs. Developing countries generally lack materials, equipments, and expertise to build hotels, transportation facilities, sewage facilities that are essential to support tourism and hence, they have to bear this kind of leakage.
- **The third form of leakage** is for making payments to foreign factors of production. The commissions, interest payments, rent or profits paid outside the country for tourism related products viz. labour, building materials, furnishings etc. are considered as leakage.
- **The fourth form of leakage** occurs when the destination country has to make payment for the promotion of the tourism of the destination in the foreign countries. For example, different countries operate a National Tourism Organisation in foreign countries. Costs involved in promoting the destinations and attracting tourists is considered as leakage.
- **The fifth form of leakage** is transfer pricing. When profits and taxes are paid in the visitor country rather than in the destination, this kind of leakage occurs. For example, many tourists purchase package tour from tour operators who use foreign owned hotels and other services. The tourists, when purchasing all-inclusive tour-packages, spend little money in the destination area. Even local banks do not get any income when the tourists rely on the use of credit cards and travelers' checks for purchases.

- **The sixth form of leakage** occurs when destination countries exempt foreign owned companies from paying duties or taxes as an incentive to attract foreign investment. At the early stage of tourism development, most of the developing countries have to bear this kind of leakage.

On the basis of the above discussion on different kinds of spending, leakages were broadly classified as external leakage (also termed as export leakage or pre-leakage), internal leakage (Import leakage), invisible leakage, structural leakage, operational leakage, financial leakage, necessary leakage, and unnecessary leakage by the different scholars (Gollub, Hosier, and Woo 23; Supradist 20; Benavides 8; Boz 201; Chirenje et. al. 14; Meyer, *Pro-poor tourism* 561-562; Tyson 4; Jules 8; Davidson 159).

External Leakage: According to Gollub, Hosier and Woo (23), external leakage is tourism expenditures that originate outside the tourism destination but it has link with domestic tourism industries. External leakage refers to tourism expenditures that accrue outside of the destination (Lange 19). Cuello (125) argued that it is the portion of the total market value of services rendered but not actually captured by the service-providing country. According to them this type of tourism leakage is difficult to measure because it originates outside the economic space of the tourism service provider and is not accounted for domestically. External leakage arises in a number of ways:

- Profits repatriation in terms of foreign investment on infrastructure viz. construction of hotels and resorts;
- External debt repayment;
- Income of the external intermediaries viz. foreign travel booking agents and airlines and promotional costs in overseas market supplying tourists.

Cernat and Gourdon (1048), Boz (201), Supradist (20), Jules (8), Benavides (8), Chirenje et. al. (14), and Mayer (*Pro-poor tourism* 561) also provided the same line of explanation regarding external leakage. Of course, Boz (201) and Supradist (20) termed external leakage as export leakage. Jules (8), Smith and Jenner (53), and Cuello (125) termed external leakage as pre-leakage.

Internal leakages: This kind of leakage arises due to import of foreign commodities and paid and accounted for domestically (Gollub, Hosier, and Woo 24; Lange 19; Mayer, *Pro-poor tourism* 561; Cernat and Gourdon 1048). Cuello (125) defined internal leakage as the losses or costs due to tourism activities that originate in the economic space of the tourism service provider and are paid and accounted for domestically. This kind of leakage occurs due to tourists' demand for quality leisure and entertainment related services and goods like branded alcoholic beverages that are produced elsewhere, organic produce, scuba equipments produced at international safety standard, quality linens and mattresses for hotels, satellite television etc. Chirenje, Chitombe, Gukurume, Chazovachii and Chitongo (14) also argued in the same line. According to them this kind of leakage occurred due to purchase of imported wines, computers, services, cutlery, and servicing machines. The developing countries have to import these products from developed countries and therefore have to bear this kind of leakage. According to Gollub, Hosier, and Woo (24), Tyson (4), and Jules (8) internal leakage also occurs when costs are paid out locally for capital and labour taken from foreign countries. The import leakage tends to be highest when the local economy is weak in terms of either insufficiency of domestically produced goods, or low quality goods (Mayer, *Caribbean tourism* 6). Boz (201), Benavides (8), and Supradist (22) termed this kind of leakage as import coefficient or import leakage.

Invisible leakages: This category of leakages refers to those real losses or opportunity costs that cannot be documented reliably, but which can exert significant and cumulative effects. One major source of invisible leakage is financial leakage and associated with tax avoidance, informal currency exchange transactions, and off-shore savings and investments (Gollub, Hosier, and Woo 24; Lange 19; Benavides 8; Supradist 23; Tyson 4). According to them another source of invisible leakage is the non-sustainability of environmental, cultural, historic and other tourism assets over time. Resource depletion and damage (for example, damage of coral reefs, beaches, wildlife, forests, water availability and quality, historic structures or districts) may negatively impact tourism arrivals and expenditures in short run, but lead to depreciation of a destination's value as

an attraction over the longer term as well as deterioration of the quality of life for local residents. Mayer (*Caribbean tourism* 7), Jules (8) and Boz (201) also defined invisible leakage in the same line. According to them, invisible leakage is nothing but the real losses or opportunity costs related to resource damage or deterioration. Cuello (126) argued that invisible leakage is the foreign exchange costs or losses that originate in the economic space of the tourism service provider but are neither documented nor properly accounted for as a tourism sector cost.

According to Gu (12) tourism leakages are associated with three types of activities in tourism development:

- Financing activity, such as profits reaped by foreign owners and repatriated to foreign countries;
- Construction activity, such as imports of building materials for the construction of tourism infrastructures; and
- Operating activity, such as imports of food, drink, and foreign labour to facilitate day-to-day tourism transactions.

Based on the activities involved in international tourism, he classified tourism leakages into three categories:

- Structural leakage,
- Operational leakage, and
- Financial leakage.

Structural leakage: This type of leakage occurs due to the imports of construction materials and technologies in establishing tourism infrastructures. Of course, according to Ankomah (434) the salaries or counseling fees repatriated to foreign countries due to the imports of foreign experts are only included into structural leakage.

Operational leakage: The operational leakage caused by imports of foreign goods, services, and managerial skills necessary for daily operation of tourism. Ankomah (434) and Smith and Jenner (53) also acknowledged this kind of leakage.

Financial leakage: This kind of leakage is the return to foreign capital providers in the form of profits, dividends, and interests repatriated to capital originating countries. Foreign capital providers can be tourism venture owners, partners, stockholders, and creditors. Harrison (12) and Smith and Jenner (53) also acknowledged presence of this kind of leakage with tourism revenue. Smith and Jenner (53) argued that tourism leakages occur because of not only imports of capital goods and consumables for the tourism industry, but also due to debt interests and equity profits repatriated to foreign countries by foreign individuals or companies. Harrison (12), Lapp (22) refers to profits repatriation as a capital leakage.

Necessary leakage and unnecessary leakage: Gollub, Hosier and Woo (23) and Supradist (57) termed import that cannot be produced in the host country as necessary leakage. On the other hand, the imports that has potentiality to be produced in the home country is an unnecessary leakage.

The classifications of leakage made by different authors viz. Gollub, Hosier and Woo (23-25), Gu (12), Supradist (20), Benavides (8) Tyson (4), Jules (8), Lange (19), Chirenje, Chitotombe, Gukurume, Chazovachii and Chitongo (14), and Boz (201) are presented in Table 2.1.

Table 2.1: Classification of Leakage

Types of tourism revenue leakage	Causes
External leakage/ Export leakage/ Pre-leakage	<ul style="list-style-type: none"> • Profit repatriations through infrastructure financed by foreign investors, External debt amortization, Overseas promotional expenditures. • Foreign booking intermediaries (airlines, cruise ship, foreign owned organization, tour operator)
Structural leakage	Imports of construction materials and technologies in establishing tourism infrastructures, salaries or counseling fees paid to the foreign experts for planning of tourism development
Operational leakage	Imports of foreign goods, services and managerial skills necessary for daily operation of tourism
Internal leakage/ Import leakage	Imported goods and services, costs paid locally for labours/ capitals from foreign sources
Invisible leakage	Real losses, opportunity cost, depreciation of resources (environmental & cultural), tax evasion or not obliged to pay in that area, informal currency exchange transaction, offshore saving & investment
Financial leakage	Return paid to foreign capital providers in the form of profits, dividends, and interests repatriated
Necessary leakage	Leakage that cannot be avoided due to inability of the host destination either to produce specific goods or provide specific service required for tourism business.
Unnecessary leakage	Unnecessary import though there is potentiality to produce in the home country itself.

Source: Compiled from Gollub, Hosier, and Woo (23-25), Gu (12), Supradist (20), Benavides (8) Tyson (4), Jules (8), Lange (19), Chirenje, Chitotombe, Gukurume, Chazovachii, and Chitongo (14), and Boz (201)

2.4 Causes of leakage:

The main cause of low positive impact of tourism on peripheral regions is existence of economic leakage (Lacher and Nepal, *From leakages to linkages* 79; Britton 332; Dedina and Young, Percy). The causes for high leakage of tourism revenue in the backward peripheral destinations are multifaceted (Lacher and Nepal, *From leakages to linkages* 80). They identified the main reasons of leakages are lack of capital, lack of

local ownership, lack of local employment, and inability to link tourism to the local economy. According to them, “the ultimate reasons are caused primarily by the nature of peripheral regions because they tend to be poor, uneducated and unfamiliar with the tourism industry” (80). The cyclical relationship caused by these factors results in high leakages is depicted with the Figure 2.1.

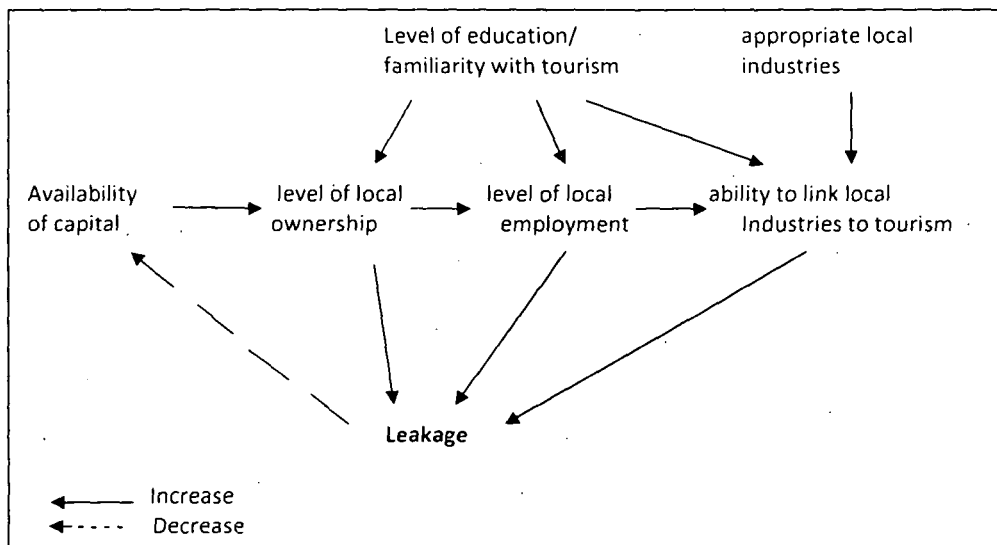


Figure 2.1. Causes of leakage

Source: Lacher and Nepal (*From leakages to linkages* 81)

The main factors identified by Lacher and Nepal (*From leakages to linkages* 80-81) that determines tourism leakage are discussed below:

Lack of local ownership: Since majority of the profits of a business are kept by the owner of the business, local ownership is crucial. Local owners retain business’s revenue in the destination. Besides, by employing local people in the business and purchasing local products, local owners reduce leakage. But this does not happen because the local people do not have proper education and they are not familiar to the tourism industry (Lacher and Nepal 80). Thus it is due to the non-local ownership of tourism related enterprises for which leakage is found in host economy (Xu, Lu, Chen and Liu 35). Hampton (652) argued that local ownership increases the benefits of the local people.

Lack of capital: According to Lacher and Nepal (*From leakage to linkages* 80), the local entrepreneurs do not have sufficient amount of capital to start tourism business. In peripheral areas, the local people even cannot run the basic services due to lack of capital (Lange 23; Tosun 624). The local entrepreneurs do not have sufficient money to start tourism business. Therefore, large businessmen from outside the locality enter into the tourism business and repatriate profits, which is a leakage.

Lack of local employment: The tourism businesses do not employ local people specially in the top managerial positions. As, the local residents do not have proper education, experience and language skill (Hemati and Koehler), they are not ideally suited for the jobs in tourism sector. Therefore, large businesses import skilled labour from outside the destinations (Ashley, Boyd and Goodwin 3; Hemati and Koehler; Mbiawa 159). The majority of the locals work as unskilled labourers and earn income below the poverty line (Lacher and Nepal 81). Even hotels cut over half of their local workforce in the low tourism season (Lacher and Nepal, *From leakages to linkages* 81; Thompson, O'Hare, and Evans 578).

Lack of ability to link local industries to tourism: The local residents of rural area cannot supply the goods and services the tourism industry needs. Therefore, goods and services have to be imported. This is because of lack of linkages of local resources to tourism.

According to Lacher and Nepal (*From leakages to linkages* 82), Torres (556-562), and Belisle (503) there are number of factors that are responsible for the low level of linkage of local resources with the tourism industry. They are broadly categorized in to three sub-heads by Lacher and Nepal (*From leakages to linkages* 82) and Torres (556-562): the supply related factors or production related factors, demand related factors, and marketing related factors. The supply or production related factors are poor local growing conditions, lack of local production of types of food demanded by tourists, lack of high end or value added products, high price of the local products, resistance to change traditional production techniques, inconsistent quality of products, poor economies of scale, increase in wage due to shift of labour from agriculture to tourism sector, increase

in property values due to tourism, undercapitalization of local industries, uncertainty of future land tenure, increase in demand for natural resources etc. The demand related factors are tourists' preferences for familiar products, tourists' fear of illness from local food, tourists' desire for inexpensive products, seasonal variation in demand, chefs' desire for more sanitary products, and chefs' inexperience with local food. The market related factors include local people's inexperience in marketing, their failure to cooperate with one another, their inability to purchase from large wholesalers, their inability to educate themselves in marketing technique, their inability to create strategic alliance with tourism industry, predatory intermediaries, inability to compete with larger corporations, kickbacks paid to chefs by large corporations, local producers' inability to provide receipts, and insufficient transportation system.

Besides the above mentioned causes, some other causes have been identified by different scholars. They are:

- Lack of familiarity of local people with tourism and lack of education (Fuller, Buultjens, and Cummings 894)
- Lack of experience and skills of the local people (Holder 312; Tosun 623; Nyaupane et. al. 1381; Xu, Lu, Chen, and Liu 33)
- Lack of local manpower and expertise (Keller 20)
- Lack of information with local people (Tosun 618)
- Poor knowledge of local people about tourism (Tosun 624)
- Problems of Marketing and management (Torres 548)
- Imports of goods from outside the region (Xu, Lu, Chen, and Liu 34)
- Lack of appropriate local industries (Wilson, Fesenmaier, R, Fesenmaier, J, and Van Es)

Some other causes of leakage are the economies of scale the larger companies enjoyed and the competition between agriculture and tourism (Lacher and Nepal. *From leakages to linkages* 83). Due to economies of scale the larger companies can supply products at a lower price than the local suppliers though it is seen that local suppliers have advantage of proximity and lower labour costs (Lacher and Nepal. *From leakages to linkages* 83; Belisle 501; Brohaman 64; Holder 312; and Torres 556)

Hemmati and Koehler also identified different causes of leakage. They are:

- Lack of local resources for which the destination has to import such resources,
- Remittance of profits of foreign direct investment,
- Commission of package tours made outside the host country,
- Lack of marketing expertise, language capacities, and infrastructure for which the tourism destination has to depend upon outsiders,
- Strong linkages between foreign-owned hotels and overseas suppliers which tend to increase leakage,
- Tourists' preference for food of their own country for which resorts have to import such food,
- Imported food are cheaper, have consistent quality, and more reliable supplies by importers,
- Barriers of communication and understanding between foreign tourism companies and local producers,
- Import of luxury goods to meet the demand of the tourist,
- Lack of proficiency of foreign language, required qualification and education.

2.5 Methods of quantification of revenue leakage:

Different scholars used different techniques for measuring tourism leakage. Generally there are four related techniques commonly used to estimate leakage and impact of tourism. They are the use of multiplier studies, the use of input-output measures, the use of tourism satellite accounts, and local impact studies utilizing a number of ad hoc measures of varying degrees of sophistication like tourists' expenditures measuring (Ryan, 158). Scholars like Chang (1-150), Goldman, Nakazawa, and Taylor (1), Meyer (*Caribbean Tourism* 8), Janeczko, Mules, and Ritchie (27) and Kim and Kim (50) used multiplier for assessing tourism impact. Goldman, Nakazawa, and Taylor (2-3) also advocated the use of other types of measures like visitors' expenditure measuring using tourists diaries (Huhtala 125-126), exit tourists' interview, mail surveys at home of the tourists, and surveying tourist-related businesses.

Ryan (166), Crompton and McKay (34) have criticized the use of tourism multiplier because tourism multiplier requires complex data in different rounds where there is chance of double counting. Due to lack of availability of data for doing multiplier analysis, studies have to rely on imported data from other studies which in turn gives rise to a question mark regarding the accuracy of the data (Ritchie 120). The multiplier analysis requires a detailed database. In many cases researchers generate their own data. The problem is that in general terms the smaller the research area, the less likely it is to have data available in a suitable format (Horwath Tourism and Leisure Consulting 7).

Belisle (499) and Lea (40-41) also stated examples of how faulty calculations of multipliers in the Caribbean gave rise to poor policy decisions. One of the criticisms made by Lea (40), Levitt and Gulati (340) was that in the Eastern Caribbean Islands, Zinder and Associates (44-45), a consulting firm, calculated tourism income multiplier amounting to 2.3 but when it was recalculated after some serious omissions, the multiplier went down to just 1. Such type of data create problems for the policy makers (Lea 43).

One of the means of assessing the economic impact of tourism is the use of Input-Output analysis, as done by Little and Doeksn (921) and Richards (128). This technique attempts to show the flow of economic transactions through the economy within a given time span, usually a year. This technique shows the inter-relationship between defined sectors of the economic system. But the main problem is that it is very difficult to define the inter-related sectors since there is no standard industrial classification for tourism industry. Because of this it is problematic to collect required data from such inter-related industries (Ryan 181; Murphy 220; Hamilton 7; and Smith 9).

Kotke (*Application of a Linear Programming 6, Estimating economic impacts of tourism* 123), Lacher and Nepal (*Dependency and development* 955), Lacher (15), Lea (43), and Walpole and Goodwin (563) also argued that the large scale technique like input-output analysis is inappropriate for local level inquiries regarding economic impact where significant data are often unavailable. They argued that in case of a small scale local economy, the economic impact can thoroughly be identified through direct estimation by primary data sources and the use of local secondary data sources.

Another factor relating to such studies is the size of the region being considered (Ryan 181). He argued that it is becoming more common for input-output analysis to be conducted at regional as well as national levels. In most cases the regional data are extracted from the national data by applying computer generated statistics. However, it should be noted that such regions are generally based on administrative zones rather than on tourists flows. In most cases due to lack of availability of data, the result of one study are used for getting result of another study. For instance Vaughan (as quoted in Ryan 181) utilized findings from one area and applied them to another due to lack of availability of data. Thus in such a case there is a question of accuracy of the result of the analysis made for the tourist frequented rural and small area on the basis of data extracted from other sources.

The UNWTO argued for the use of Satellite Accounting for measuring tourism impact. But according to the critics, this method has a problem of overestimation of the impact. The World Travel and Tourism Council (WTTC) measured tourism impact in Canada which was as much as three times more than the impact calculated by Hansen and Jensen (Ryan 188).

However, it can be said that no mode of calculation will be entirely beyond criticism because to some extent, there will be an arbitrary component in the definition of any activity. But, the important thing is that what might be sufficient for national study may not always be sufficient for getting results for the small scale local study (Ryan 189).

Due to the problems associated with the above discussed methods some scholars suggest use of Tourism Expenditure Modeling. Ryan (179) himself advocated the use of different measures to estimate local impact of tourism. He argued that when assessing the economic impact of events, the key variables are simple to identify and include the number of visitors, the duration of their stay, the main types of accommodation the tourists accessed and tourists' expenditure on food and drink. An estimate of these main variables will account for much of the first round impact of tourist spending. Similar works were done by Lacher and Nepal (*From leakages to linkages* 77; *Dependency and development* 947), Lacher (1-64), Perz and Sampol (624), Sandbrook (*Putting leakages in its place* 124; *Local economic impact* 21), and Walpole and Goodwin (559).

In all the above cases, the scholars accounted only those amount of tourists expenditure that are spent in the study area to estimate tourism revenue of a destination. In their view, it thus becomes important to disaggregate tourists' expenditure spent outside the study area in different heads such as flights, commission of the tour operators from outside the destination etc. Whereas Perz and Sampol (624) did the study by doing tourist survey, the others did census study of tourism business houses including tourist' guide and other tourism related services of the study areas and sample survey of tourists so that data can be compiled and compared. Besides doing census of tourism businesses, Lacher and Nepal (*From leakages to linkages 77; Dependency and development 947*) and Lacher (12) did in-depth studies of the tour guides, tourism businesses and local residents, and consulted visitation records available with tour camps and did sample survey of tourists to estimate their expenditure. The implication of doing census of tourism business houses is that the revenue of all business houses and other tourism related business activity is equal to the tourists' expenditure in the study area. By collecting data related to revenue of the business houses and the spatial distribution of their expenditure on purchase of goods and services and on payment of salaries and wages of the workers, leaked revenue and the retained revenue were estimated. Besides doing census of tourism business viz. tour camps, restaurants and tourists frequented shops, Walpole and Goodwin (559), and Sandbrook (124) interviewed tourists to estimate the amount of expenditure of the tourists that have not been spent in any tourism business but spent on payment of tips, donations or expenses in the destinations on accompanied drivers or guides. By summing up tourism revenue, retain revenue and leaked revenue of each of the tourism businesses, tourism revenue, retain revenue and leaked revenue of the study area as a whole were estimated. The studies undertaken by the scholars like Lacher and Nepal (*From leakages to linkages 77; Dependency and development 947*), Walpole and Goodwin (559), and Sandbrook (*Putting leakages in its place 124*) indicate that the tourism revenue leakage can be easily be estimated by deducting retained revenue from the total tourism revenue in the study area.

2.6 Severity of tourism leakage:

Tourism leakage reduces the beneficial impact of tourism on the economy of the host country. Though it is believed that tourism helps developing countries in earning foreign exchange, it has been challenged in many studies because of tourism revenue leakage (Gu 12; Cerniat and Gourdon 1048). Different scholars found different amount of leakage in their studies.

Boz (202) estimated different rates of leakage for different countries. According to him, 70% of the tourism revenue leaves Thailand as leakage via foreign owned tour operators, airlines, hotels, imported drinks and food etc. Third world countries viz. Caribbean and India have to lose 80% and 40% respectively as leakage (Boz 202). On the Caribbean, St. Lucia, Aruba, Antigua and Barbuda, and Jamaica had a leakage rate of 56%, 41%, 25% and 40% respectively (Boz 202).

Benevides (8) and Mayer (*Pro-poor tourism* 561) argued that leakage rate is higher in case of developing countries compared to that of the developed countries. According to Benevides (8) developing countries have leakage between 40-50% whereas developed countries have leakage between 10-20%. Dieke (430) estimated that leakage rate in Gambia in the early 1990s were 77% which is a combination of internal and external leakage. Besides, Beekhui found 30-50% leakage in St. Lucia in early 1980s, Pattullo (37-39) found around 70% of leakage in the Caribbean region as a whole. In a study undertaken by Jayawardena and Ramajeessingh (177) it was found that Dominica and the Bahamas had 45% and 90% of leakage respectively. According to Markandya (7) and Peric, Mujacevic and Simunic (4), the leakage rate is 55% in the islands of the underdeveloped countries and is less than 15% in Mexico, Thailand, Turkey and the Dominican Republic. Barnes, Schier and Rooy (17) estimated that in Namibia, the leakage rate was 59%. According to Lejarraga and Walkenhorst (419) the leakage rate is 37% in low income countries and it is 34% in high income countries.

Khalifah and Tahir (as quoted in Gu 12) noted in their analysis on Malaysia's tourism industry that 50% of foreign exchange earned in Malaysia's tourism was lost by way of import of foreign goods, overseas payments of profits and capital remittances of foreign tourist companies, remittance of wage of the expatriate workers, repayment of interest on foreign loans, management fees of foreign managerial firms, royalties and

other fees paid to foreign companies and payment for tourism promotion and publicity in foreign countries. According to Mazumder, Ahmed, and Al-Amin (152), the tourism leakage in Malayasia was 22% of the tourists' expenditure. According to Liu and Liu (170), the tourism leakage was 16% in 1975 in Malayasia. According to the World Bank, on an average, 55% tourism revenue of the developing countries leaks out of the host economy due to the dependency of these countries on foreign goods and services (Lantz). According to UNCTAD 2010 (9) the average leakage for most of the developing countries is between 40% and 50% of gross tourism earnings. According to Smith and Jenner (60) this amount is as high as 90%. Ryan (as quoted in Gu-13) found in his study that out of the total tourism revenue of US \$ 3.3 billion in Caribbean Countries, two third of it leaked out of the region due to imports. In the Island of St. Lucia in the Caribbean, 58% of food and 82% of meat consumed by tourists were imported from foreign countries. In the same year, in Fiji, 80% of the tourism revenue leaked out due to imports. In another study undertaken by United Nations Environment Programme (UNEP), it was found that leakage rate for Caribbean, India, and Thailand were 80%, 40%, and 70% respectively. These amounts were also recognized by Muhanna (41). Forsyth and Dwyer (68) found in their study that in Australia, about 44% of total tourist expenditure goes to the hands of the firms owned by foreigners.

In most all-inclusive package tours, about 80% of travelers' expenditures go to the airlines, hotels and other international companies (who often have their headquarters in the travelers' home countries), and not to local businesses or workers (UNEP). A study of tourism leakage in Thailand estimated that 70% of all money spent by tourists ended up leaving Thailand (Sinha, Qureshi, Uniyal, and Sen 215).

The above mentioned estimates are calculated from the point of view of national scale or international scale. Considering pessimistic view of tourism leakage in a local level economy like a village or a region, a number of empirical studies have been done on local level economies by Lacher and Nepal (*From leakages to linkages 77: Dependency and development* 947). Sandbrook (*Putting leakages in its place* 124) and Walpole and Goodwin (559) which found that there were 50 to 60% leakages from those areas.

2.7 Strategies to Reduce Leakage:

Some sources of leakage are unavoidable. Foreign-owned hotels and airlines are necessary for most of the established tourism industries. However, encouragement of domestic involvement in a country's tourism industry may reduce leakage in the long run. Currently, the most popular measure is that resorts ban the tourists from purchasing goods outside the resorts (Lacher and Nepal, *From leakages to linkages* 80; Freitag 550). Countries may limit the use of foreign currency within their borders, reducing the effect of transfer pricing. Many countries require visitors to have a certain amount of money before entering (Mill).

The literature suggests a variety of potential methods for reducing leakage. Those strategies are illustrated in the Table 2.2.

Table 2.2: Strategies suggested by different scholars

Name of scholars	Strategies suggested
Supradist (53-54)	<ul style="list-style-type: none"> • Increase locals' sale and marketing points • Provision of internet marketing to reduce foreign dependency • Small scale enterprises may try to retain their customer base by making a good relation with them such as sending direct mail, customer care activities, sending a birth day card to customer etc. • Maintenance of quality by the small accommodation providers • Local company's involvement in transportation through partnership with big foreign transportation company • Increase link of the agricultural sector with the tourism industry etc.
Boz (203)	<ul style="list-style-type: none"> • Buying the commodities from people of home country • Use of local fruits and vegetables • Employment from local source • Use of accommodation owned by local people • Support the destination that integrates tourists into the local economy so that the tourists can purchase local products. • Promoting resorts that employ local people and pay reasonable salaries • Using airlines from the host country

Name of scholars	Strategies suggested
Gollub, Hosier and Woo (37-47)	<ul style="list-style-type: none"> • Building of brand image, • Building of product diversity through development of premium beaches, • Off-shore activities, • Sports facilities, • Cultural destinations, • Natural attraction (viz. colonial ranches, homes, farms, orchard, etc), • Urban culture and event supply, • Amusements and theme parks etc., • Improvement of skills of the staffs at all level of management viz. hotels, restaurants and destinations, and • Improve adequacy of infrastructure.
Benevides (11)	<ul style="list-style-type: none"> • The provision of incentives to reinvest profits and potential cash transfers that otherwise would be invested abroad; • The enhancement of the capacity of tourist destinations for intensifying the production of goods and services required by the tourism sector; • The provision of incentives to domestic investors to expand their participation in tourism; and • The enforcement of domestic competition policy against anti-competitive practices by tour operators.
Goodwin (<i>Sustainable tourism and poverty elimination 4</i>)	<ul style="list-style-type: none"> • Enable local community access to the tourism market, • Maximise the linkage into local economy, • Build on the complement existing livelihood strategies through employment and small enterprise development, • Evaluate tourism projects for their contribution to local economic development, • Ensure the maintenance of natural and cultural assets, • Control negative social impacts, • Control the rate of growth of tourism.

Name of scholars	Strategies suggested
Goodwin (<i>Local community involvement</i> 349)	<ul style="list-style-type: none"> • Co-operative society of the local people should be formed • Better quality service with improved safety facilities should be provided. • Local residents should be permitted to provide drinks and souvenir to visitors in some capacity. • Training to be imparted to local communities, particularly ecological knowledge and language skills for residents who wish to be a tour guide (Tosun 624) • Training should be imparted to the local residents in the field of making souvenir. • Local people should be involved in planning and management of tourism activities. • There should be increased tourist events such as fishing, boat races, kite flying, and festivals should be organized.
World Tourism Organisation (as quoted in Akma and Keiti 744)	<ul style="list-style-type: none"> • Encouragement of local ownership (Milne 511; Hampton, <i>Backpacker Tourism</i> 652; <i>Heritage</i> 474; <i>Small is beautiful</i> 4) and management of tourism resources, and small and medium enterprise development; • Enhancement of linkages and partnerships to the local economy; and • Developing local sources of supply of goods and services to the tourism establishments.
Akama and Kieti (746)	<ul style="list-style-type: none"> • Expansion of local employment and self-employment, • Expansion of informal sector opportunities, • Development of partnership amongst public and private sectors, NGOs and local communities, • Improving social and cultural impacts, • Increasing local access to infrastructure and services provided to tourists, • Increasing participation of local people in decision making process, and • Capacity-building to enable their participation.

Source: Compiled from Supradist (53-54), Boz (203), Gollub, Hosier, and Woo (37-47), Benevides (11), Goodwin (*Sustainable tourism and poverty elimination* 4, *Local community involvement* 349), World Tourism Organisation (as quoted in Akma and Keiti 744), and Akama and Kieti (746)

Andriotis (338) and Rodenburg (193) suggested in decreasing the size of hospitality firms in order to minimise leakage. They found that larger the size of the hospitality firm, larger is the amount of leakage. Because, the larger the size of the firm, the greater the possibility of purchases outside the locality. Hospitality firm with big size tend to buy their supplies outside their locality in order to enjoy economies of scale that are unavailable to their smaller counterparts. On the other hand, the smaller sized hospitality firms are more likely to purchase their supplies from local market or vendors. Rodenburg (193) found that “smaller scale enterprises offer a greater opportunity for profit and control to local people than do enterprises on a large scale”. Smaller hospitality firms employ a higher number of family members and hence have to bear minimum amount of leakage (Andriotis 338). Freitag (549), Brohman (56), Lepp (*Tourism and dependency* 1207; *Tourism in a rural Ugandan Village* 24), and Mbaiwa (*Enclave tourism* 169; *The socio-economic sustainability* 503) advocated elimination of enclave tourism for reducing leakage. “Tourism that develops in remote areas and is largely owned and controlled by outsiders is enclave tourism. Enclave tourism is a kind of internal colonialism” (Mbaiwa, *The socio-economic sustainability* 503). They argued that leakage can be avoided by developing a small scale tourism industry free of mega resorts and luxury enclave.

Besides these, important strategies suggested by different authors are increase of domestic tourism (Seckelmann 89), increase of the level of host involvement (Nyaupane, Morais, and Dowler 1375), local control and participation (Hampton, *Backpacker tourism* 653); creation of a sense of responsibility in the rural village (Lepp, *Tourism and dependency* 1208; *Tourism in a rural Ugandan village* 20), increase of linkage of the agricultural sector with tourism (Belisle 509; Torres 546), and promotion of alternative or backpacker tourism (Brohman 56; Scheyvens, *Backpacker tourism* 147). Unfortunately, these factors are generally outside the destination periphery’s control and are more likely to be determined by travel agencies and tourism companies located in the urban areas (Lacher and Nepal, *From leakages to linkages* 83). Other studies have discussed strategies that involve both the peripheral tourism destinations and the urban centres (Lacher and Nepal, *From leakages to linkages* 83; Telfer and Wall 642; Torres 547). But

executing such strategies can make insignificant impact on the rural local economy and face resistance from stakeholders outside local economy who will not profit from the strategy, as reducing leakage from rural areas may decrease earnings in urban areas (Cohen 224). Lacher and Nepal (*From leakages to linkages 90-94*) focused some strategies that are applicable in the local level and also compatible with the economy. According to them, adapting proper strategies depending on the diversity of the levels and kind of leakage in the village level economy, tourism income can be distributed throughout the local residents, more local residents can be turned into stakeholders in the tourism industry and leakage of tourism revenue can be minimised. A village should adopt such strategies that are based on resources available there. For minimising leakage Lacher and Nepal (*From leakages to linkages 90-94*) focused three unique strategies that are compatible to the situation of the local economy. Those strategies are:

- Formation of co-operative
- Charging substantial entrance fees
- Selling locally made products

CHAPTER-III

**OBJECTIVES, SCOPE,
LIMITATIONS AND STUDY AREA**

CHAPTER III: OBJECTIVES, SCOPE, LIMITATIONS AND STUDY AREA

3.1 Research Gap:

Literature reviewed in the previous chapter has revealed that many studies have been carried out in the field of tourism revenue leakage. All the studies estimated leakage in national level or international level. There are very few studies done at the village level economy adjoined to national parks. Of course scholars like Sandbrook (*Putting leakages in its place* 124), Walpole and Godwin (559), and Lacher and Nepal (*From leakages to linkages* 77; *Dependency and development* 947) documented leakage amount of tourism revenue in the village level economy. Walpole and Goodwin (559) undertook their study in Komoda National Park, Indonesia and the study included rural gateway town in local economy defined by them. Lacher and Nepal (*From leakages to linkages* 77; *Dependency and development* 947) estimated tourism revenue, leaked revenue, and net income (retained revenue) in some rural tourism destinations of Northern Thailand. Sandbrook (*Putting leakages in its place* 124) estimated annual tourist spending (tourism revenue), leaked revenue, and retained revenue clustering adjoining villages of Bwindi Impenetrable National Park, Uganda as local economy. But these studies did not undertake the task of finding out the causes of revenue leakage and developing local level strategies for reducing leakage.

It is believed that the nature based tourism destinations are more prone to leakage (Sandbrook, *Local economic impact* 21). It is important to examine whether leakage is found in every nature based tourism destination. It is also necessary to find out if there exists any difference in the leakage rate among different destinations. But no empirical studies have been found that examines how much leakage varies in different nature based tourism destinations. Causes of leakage have been identified by different scholars that are general in nature. No empirical works are done to identify specific causes of leakage of a particular nature based tourism destination. Besides, no studies have been found which proposed development of destination level strategies for minimising leakage. To fill up this research gap the present study was proposed with an aim to fulfil the objectives mentioned in the Section 3.2 of this Chapter.

3.2 Objectives of the study:

The objectives of the study are:

1. To identify the different categories of tourism businesses where revenue leakage occurs in Kaziranga National Park (KNP) and Manas National Park (MNP)
2. To quantify the approximate amount of revenue leakages from the above mentioned destinations.
3. To identify the causes of revenue leakage in the study areas.
4. To develop local level strategies to mitigate revenue leakage.

3.3 Scope of the study:

The scope of the study can be noted in regards to the geographical area, period of the study, and the population of the study.

1. The study was conducted in the fringe villages situated in the periphery of ranges of Kaziranga and Manas National Parks.
2. The period of the study was 2010-11 i.e. the data from November 2010 to April, 2011 was considered for the study.
3. The population of the study was the tourism businesses located in the geographical areas of Kaziranga National Park and Manas National Park.
4. The study area was confined to nature based tourism destination only.
5. Only direct spending of tourists were considered for the study.
6. It is not possible to estimate tourism business spending like taxation, equipment purchases (Sandbrook, *Message to the author*)¹. Therefore, these amounts were ignored in the study.
7. It is worth mentioning here that the study focuses primarily on the distribution of economic benefits from the first round of tourism expenditure. The second or subsequent rounds were not accounted here as done in multiplier effect. The estimation of multiplier effects needs substantial data which were not

¹ Sandbrook, Chris. Message to the author. 4 January 2012. E-mail.

available in case of small scale village level economy (Walpole and Goodwin 565), and was therefore outside the scope of this study.

When salaries are paid to local employees, it is regarded as retention in the first round. If those salaries or wages are spent by the local employee on goods and services imported, it may be leakage in the second or consecutive rounds. But these second or third round effects are out of the scope of the present study. Likewise, salaries and wages paid to the non-local employees are regarded as leakage in the first round. If those salaries or wages are spent by the non-local employees on local goods and services (local economy), it may be regarded as retention in the second or consecutive rounds. Though non-local employees may be infusing their earnings to local economy, it is possible only in the second or consecutive rounds, and therefore it is out of the scope of the study and has not been considered. The whole work is based on the first round transaction as suggested by Walpole and Goodwin (565).

It was found in the survey that non-local employees need not spend anything from salaries and wages since accommodations, meals, and medical treatment are provided by the employers free and these are the non-cash component of salaries and wages. The spending on other items comes under the second level of leakage. Hence, this is not included in the calculation of leakage in this study.

3.4 Limitation of the study:

A particular limitation of estimation of economic transactions of the tourism businesses in the study areas is inadequacy of data. Most of the business houses, specially the small business houses like tour camps owned by local actors, elephant safari, jeep safari, souvenir shops, boating service, tour guides, retail outlets etc. do not maintain any records of transactions.

Hence, revenue estimates was to be made on the basis of recall, assumption or oral testimony. In such situations, for improving accuracy, triangulation from different sources are to be carried out as suggested by Walpole and Goodwin (565), and Sandbrook (*Putting leakages in its place* 130). This was done in the present study.

In line with the proposition made by Sandbrook (*Putting leakages in its place* 130), it is acknowledged that the overall values obtained gives a general rather than precise indication regarding the estimated figure of tourism revenue, leaked revenue, and retained revenue.

3.5 Study Area: Kaziranga and Manas National Parks:

Kaziranga National Park (KNP) is located at $26^{\circ} 30' N$ to $26^{\circ} 45' N$ latitude and $93^{\circ} 08'$ to $93^{\circ} 36'$ E longitude and 40-80m altitude (Hill area about 1220m) and 220 km away from the capital of Assam, Guwahati.

KNP, a name known worldwide for its success in the conservation history of one horned Indian Rhinoceros, provides habitat for a number of threatened species and migratory birds. Spread over civil jurisdictions of Nagaon and Golaghat Districts of Assam with the mighty Brahmaputra River on the North and verdant Karbi Anglong Hills on the South.

The climate of the National Park is sub-tropical monsoon with average rainfall of 1320 mm and temperature ranging from $8^{\circ} C$ in winter to $38^{\circ} C$ in summer.

Kaziranga was declared as a reserve forest in 1905. It was declared a National Park in 1974. It spreads over an area of 859.42 km². A World Heritage Site (nature), declared in 1985, the National Park hosts two-thirds of the world's Great One-horned Rhinoceroses. KNP boasts of the highest density of tigers among protected areas in the world and was declared a Tiger Reserve in 2006. The national park is home to large breeding populations of elephants, wild water buffalo, and swamp deer. KNP is recognized as an Important Bird Area by Birdlife International for conservation of avifaunal species. Located on the edge of the Eastern Himalaya biodiversity hotspot, the National Park combines high species diversity and visibility.

The National Park has four forest ranges² viz. Gorakati or Burapahar Range, Bagori Range, Kohora Range, and Agoratoli Range. Though each range has tourist entry points, Kohora is more popular among the tourists and has highest concentration of tourism businesses. This is because concentration of wild life is more in Kohora and tourists can easily sight wild animals through jeep safari and elephant safari.

KNP is a major tourism destination in North-East India. It is the most popular tourism destination of Assam. A substantial number of domestic and foreign tourists visit Kaziranga National Park, every year. The number of tourists has been increasing over the years. Tourists can enjoy Jeep Safari and Elephant Safari at prescribed time into the national park.

According to the Department of Forest, Government of Assam, the destination attracted 1,19,839 tourists during the year 2010-11, out of which 1,12,392 were domestic tourists and 7,447 foreign tourists (Table 3.1). The revenue collection by the forest department was INR 13.67 million during the period. The Department of Tourism, Government of Assam has invested INR 18.11 million for the tourism development around KNP till 2010-11 (Department of Tourism, Government of Assam).

According to the same source, there are 49 fringe villages having 39,455 populations in 8163 households. The complete list of villages with population and households is provided in Annexure X.

² A forest range is a term used to signify an area containing one or more (usually) demarcated and (usually) protected or resource-managed forests, for administrative purposes. The term was in use in British India, and hence India, Pakistan and Bangladesh use this term for administrative purposes. (http://en.wikipedia.org/wiki/Forest_range)

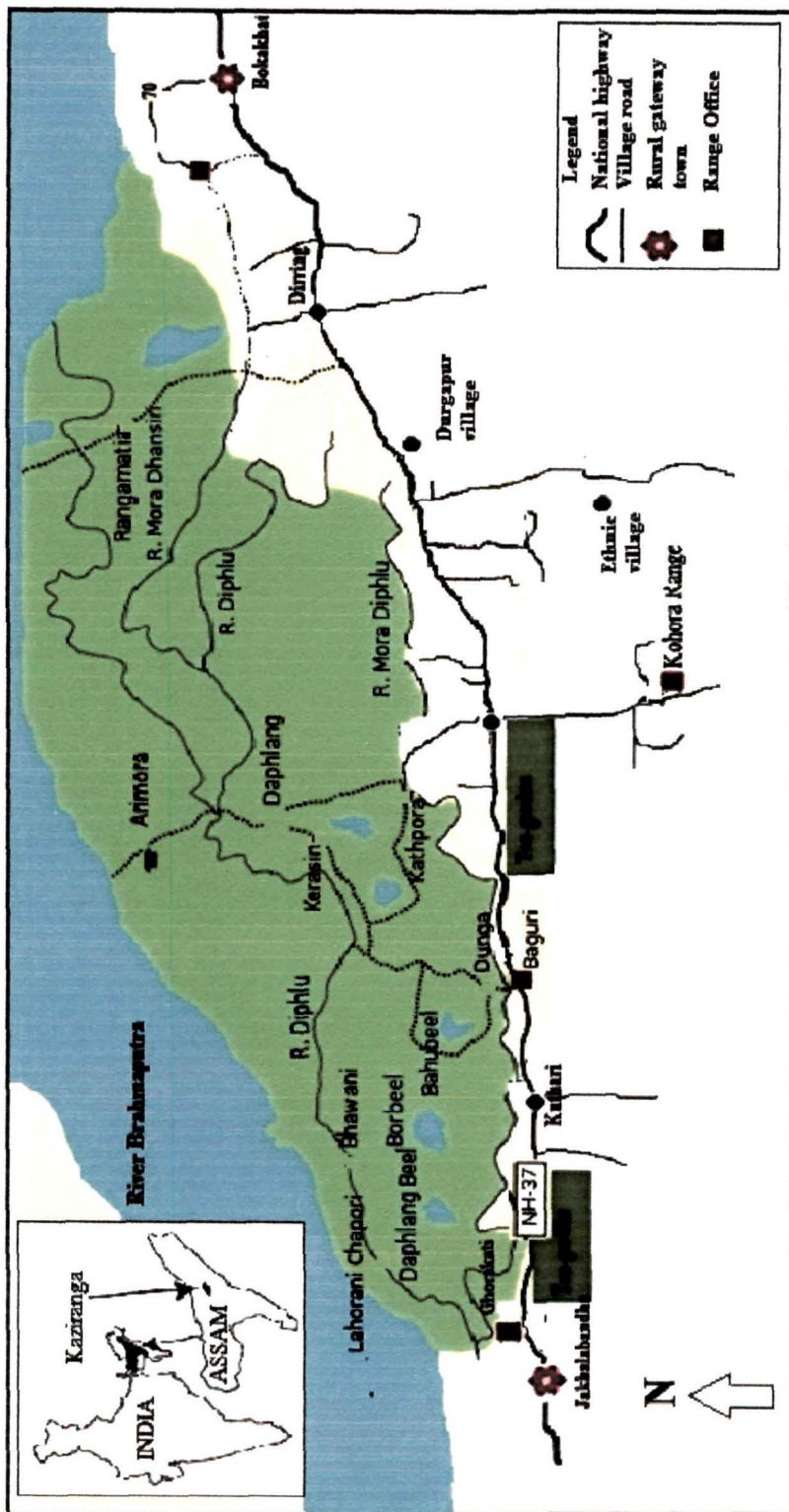


Figure 3.1: Map of the study area, KNP

Table 3.1: Trend of tourists in KNP

Year	Indian	Foreigners	Total
1997-1998	17117	2408	19525
1998-1999	18157	1091	19248
1999-2000	37696	1623	39319
2000-2001	50498	1838	52336
2001-2002	44162	2144	46306
2002-2003	59811	2055	61866
2003-2004	57864	3773	61637
2004-2005	67719	5154	72873
2005-2006	72362	4711	77073
2006-2007	67926	5748	73674
2007-2008	53640	6106	59746
2008-2009	100284	5767	106051
2009-2010	117294	6599	123893
2010-2011	112392	7447	119839

Source: Department of Forest, Government of Assam

Manas National Park (MNP) is located at 26°43'N to 90°56'E. The National Park is the largest national park of Assam and the first tiger project of the State. The MNP was declared a sanctuary on October 1, 1928 with an area of 360 Square Kilometer (km²). Manas Tiger reserve was created in 1973. It was declared as a World Heritage site in December 1985 by United Nations Educational, Scientific and Cultural Organisation (UNESCO). In 1989, the tiger reserve with 2837 km² was declared as Biosphere Reserve. In 1990, the core area with an area of 500 km² was declared as National Park (now 950 km²). Out of the total area, 2600 km² was declared as Chirang Ripu Elephant Reserve in 2003. From 1989 to 2005, MNP was closed for the tourists due to security reasons. The trend of tourists in MNP is depicted in the Table 3.2.

Table 3.2: Trend of tourists in MNP

Year	Indian	Foreign	Total
2005-06	178	21	199
2006-07	266	32	298
2007-08	3034	78	3112
2008-09	10145	251	10396
2009-10	10935	210	11145
2010-11	11567	430	11997

Source: Department of Tourism, Government of Assam

In 1992, UNESCO declared MNP as a world heritage site in danger due to heavy poaching and terrorist activities. From 2005, some local Non-Governmental Organisations (NGOs) viz. Manas Ever Welfare Society (MEWS), and Manas Mauzigendri Eco-tourism Society (MMES) started to campaign and organise awareness programmes among the local people living in the fringe villages of the National Park about the importance of wild resources for the eco-system and started eco-tourism activities so that people can find an alternative source of income through tourism. With the local people becoming alert, they stopped wood smuggling and poaching for their own sustainability. They converted poachers and wood smugglers into the volunteers for conservation and developed tourism in the area. This has led to gradual afforestation and increase in habitat for animals during the last few years. With the conservation efforts of the local NGOs and of people of the adjoining villages, the National Park has been able to re-achieve the glory of World Heritage Site in 2011. This incidence indicates how important the local community's effort is regarding conservation of nature based tourism destinations.

MNP provides habitat to 22 of India's most threatened species of mammals. In total, there are nearly 60 mammal species, 42 reptile species, 7 amphibians, and 500 species of birds, of which 26 are globally threatened. It is also an Important Bird Area. MNP is famous for some endangered species like wild water buffalo (*Bubalus arnee*), White Winged Wood Duck (*Cairina scutulata*), Bengal Florican (*Houbaropsis bengalensis*), Bengal Tiger (*Panthera tigris tigris*), Pangolin etc. It is also well known for species like the Assam Roofed Turtle (*Pangshura sylhetensis*), Hispid Hare (*Caprolagus hispidus*), Golden Langur (*Trachypithecus geei*), and Pygmy Hog (*Sus salvaius*)(World Heritage Site).

MNP is famous for its unique scenic beauty. It is located at the confluence of Indian, Ethiopian, and Indo-Chinese realms resulting in the magnificent biodiversity (Ministry of Environment and Forests, Government of India). The river Manas, a major tributary of the Brahmaputra, flowing through the national park has enhanced the scenic beauty. It has also created opportunity to view the park through boating. The national park is situated in the North-West Bank of River Brahmaputra and is 175 km away from Guwahati, the capital of Assam.

From the report of Dolphin Foundation (23-27) it was found that there are 79 fringe villages with total population 44,779 in 8244 households (Annexure XI). Out of the total population, 46% belong Bodo Tribe and 55% belong other tribes and communities like Nepali, Chaotal (Tea tribe), and Assamese (non-tribal). Out of the total population only 34% are educated and out of them only 8.5% are either matriculate or above. The economic condition of the people is very poor (The Assam Tribune). 55% households have agricultural land and they are still adopting traditional farming system. Out of the total population, 30% are engaged in piggery farming, 24% in cultivation, 39% in handlooms, 3% in sericulture, 3% in government jobs and 1% in poultry farming. Information regarding involvement of local people in tourism is not available in the report.

The National Park is divided into three ranges viz. *Panbari Range* (Western Range), *Bansbari Range* (Central Range) and *Bhuyanpara Range* (Eastern Range). There is no tourist entry point in Panbari Range. In Bansbari Range, there is only one tourist entry point i.e. Bansbari Gate or Manas Gate which can be reached only through the rural gateway town, Barpeta Road. In Bhuyanpara Range also, there is one tourist entry point viz. *Kokilabari* which can be reached through the rural gateway town, *Pathsala*.

According to the Department of Tourism, Government of Assam, till 2010-11, the Government has invested INR 10.30 million for the development of tourism in MNP.

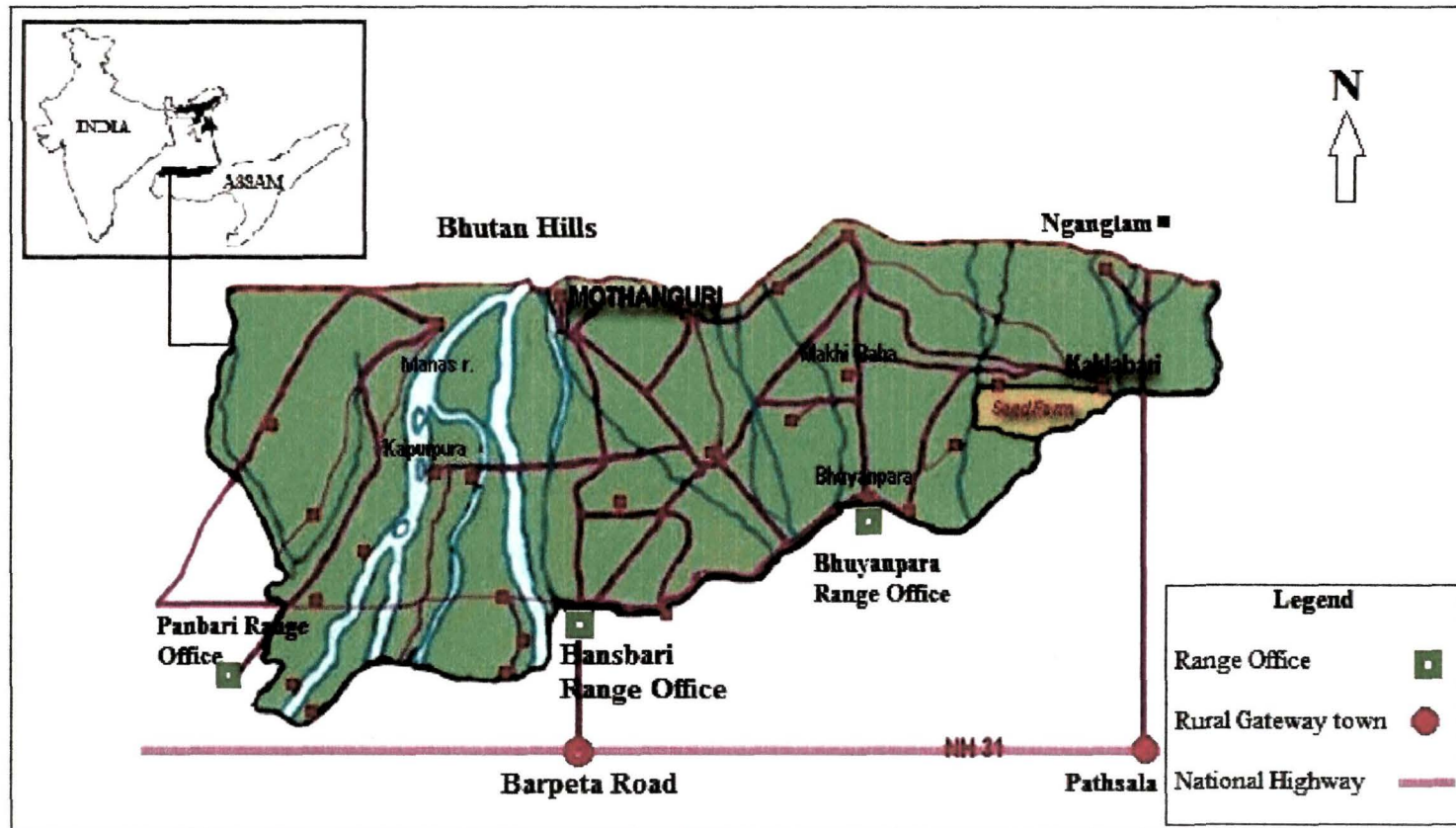


Figure: 3.2: Map of the study area, MNP

CHAPTER-IV

METHODOLOGY

CHAPTER IV: METHODOLOGY

The objectives of the study are to identify the categories of tourism business where tourism leakage occurred in KNP and MNP, to quantify the approximate amount of tourism revenue and revenue leakage in the study areas, to identify the causes of leakage and finally to develop local level strategies for minimizing revenue leakage. For fulfilling the four objectives, the study was divided into five phases. These phases are:

1. Developing functional definition of Tourism Revenue, Leaked Revenue and Retained Revenue
2. Tourist survey
3. Tourism business survey
4. Stakeholders analysis
5. Strategy formulation for minimizing leakage

To begin with, it was felt necessary to have functional definitions of Tourism Revenue (TR), Leaked Revenue (LR), and Retained Revenue (RR). During the literature review, it has been seen that TR and LR have been defined at various levels, starting from international to regional. Therefore, the first phase of the study was dedicated to formulation of functional definitions of these three concepts for this specific study.

During the second phase of the study, tourist survey was done to identify the heads of expenditure incurred by the tourists and the different goods and services purchased by the tourists in the study area.

The tourist survey helped in identifying the tourism businesses in the study area that are to be included for the next phase of the study. There are varieties of business establishments around KNP and MNP. All businesses are not tourism related. Therefore, the tourist survey helped the author to identify where tourists spend. Only those business houses of the study areas are termed as tourism businesses where the tourists spend for satisfying their needs.

After identification of the tourism businesses, census survey was undertaken. This survey helped in identifying the categories of tourism businesses where tourism leakage occurs, and to quantify the Tourism Revenue, Leaked Revenue and Retained Revenue. Besides, the survey helped in identifying the causes of leakage of tourism revenue.

The fourth phase of the study was stakeholders analysis. Stakeholders from different tourism related fields were selected for the survey. It provided valuable information about the opportunities for the local people to get involved in tourism related activities so that tourism revenue can be retained within the study area. This formed a major input for strategy formulation.

With the information acquired from stakeholders analysis and literature survey, local level strategies for minimizing revenue leakage are framed separately for KNP and MNP. These strategies were finalized on the basis of experts opinion survey in three rounds. The experts opinion survey finally assisted in achieving the fourth objective of the study.

The period of the study was 2010-11. As per as the analysis of impact of tourism on local economy is concerned, one year data is sufficient and significant (Walpole and Goodwin 563; Sandbrook, *Putting leakages in its place* 127; Lacher and Nepal, *Dependency and Development* 954-955, *Leakages to linkages* 87). Data from November, 2010 to April, 2011 were considered since the KNP and MNP are open for tourists from November to April only. Through informal discussions with managers of the tourism business houses, it has been found that the business houses have been purchasing commodities from the same sources over several years. This implies that the expenditure pattern have not changed over the years. The employees, irrespective their localities, have been engaged since the last five years, and commodities have been purchased from the same sources. Therefore, one year data was representative and significant for calculation of revenue, expenditure and leakage and net revenue or retained revenue.

The methodology of the study can be shown with the flow chart given in the Figure 4.1

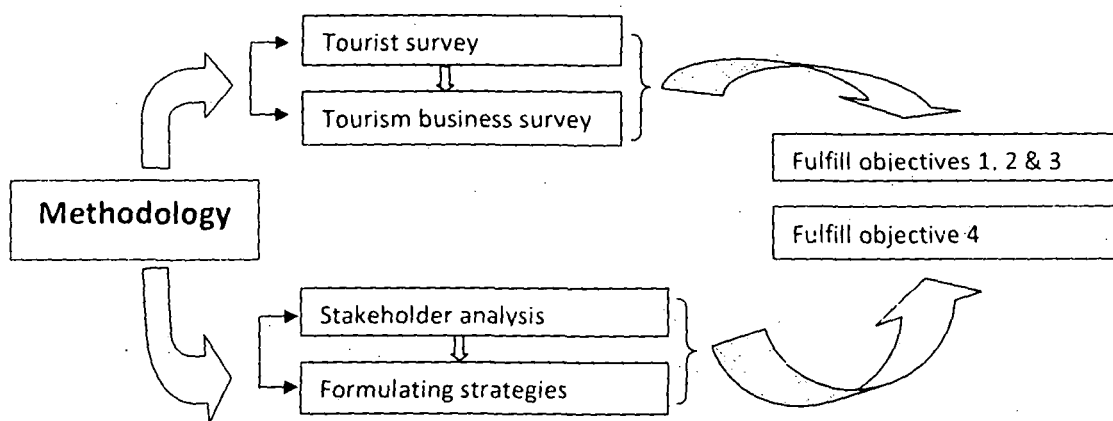


Figure 4.1: Diagrammatic representation of the methodology of the study

4.1 Functional definitions of Tourism Revenue, Leaked Revenue and Retained Revenue:

Sandbrook (*Putting leakages in its place* 128) defined tourism revenue (TR) as “the money which was spent by the tourists in the destination economy, either directly or indirectly through their tour operators”. This excludes money spent by tourists outside the destination economy to the tour operator or tour agents and includes the money which is spent only in the destination. Since the money spent in flights, marketing, insurance, retailing, packaging etc. are never present in the destination, these are not considered relevant for calculating tourism revenue. This approach is adopted here. Thus, only that amount of money was considered as tourism revenue which was spent by the tourists in the study area under different heads.

A local person was defined as an individual resident in the study area who lived there for at least 3 years (Sandbrook, *Putting leakages in its place* 128; *Local economic impact* 23). Accordingly, the local economy is defined as the economy of the fringe villages at the periphery of Forest Ranges of Kaziranga National Park and Manas National Park. Those villages have been considered that shares at least one border with the National Park.

Leaked Revenue is defined as all tourism revenue which did not accrue to a local person either as a payment for using goods and services or as profits to a locally owned business (Sandbrook, *Putting leakages in its place* 128). The leakage rate was calculated as $(LR/TR) * 100$ (Sandbrook, *Putting leakages in its place* 129). The components of total spending which were considered leaked are detailed in the Table 4.1.

Accordingly, the Retained Revenue (RR) is the payment accrued to a local person either as payment for using goods and services or as profit to a locally owned business. The retained revenue in the study area was calculated by deducting LR from TR.

Table 4.1: Components of tourism revenue leaked

Spending considered leaked

- Spending by tourism businesses on food, grocery items, housekeeping items, raw materials bought outside the study area.
 - Profit of non-local owners of the tourism businesses
 - Wages and salaries paid to non-local employees.
 - Fuel costs of boating and jeep safari service
 - Rent of elephant safari hired by local actors.
-

Source: Adapted from Sandbrook (*Putting leakages in its place* 129)

4.2 Tourists survey:

The sole purpose of undertaking tourists' survey was to classify the tourists' expenditure heads that is spend in the study area only. From the survey of the tourists, the spending of the tourists in the study area were classified as: Lodging, food, jeep safari, elephant safari, boating, spending in tour guide, spending in souvenir items, spending in stationery items, and spending in tobacco and liquor. Sandbrook (*Putting leakages in its place* 128) classified tourist spending into accommodation, activity, out of pocket spending (viz. on shopping, handicrafts, tips and donations), and spending on tour staff viz. drivers and tour guide accompanying tours. In the tourists' survey it was hardly found that tourists spend in tips and donations.

Therefore, the spending on tips and donations were not estimated in tourism revenue. The accompanying tour staff viz. drivers and tour guides accompanying tours

spend a part of their receives on food and beverage and other goods and services in the study area. Their spending is the revenue of the tourism businesses. Therefore, spending of the accompanying tour staffs were not estimated separately since revenue of the tourism businesses were recorded for estimating tourism businesses.

The data collected from the tourists survey was used for triangulation to increase the accuracy of the primary data collected from the tourism businesses regarding Tourism Revenue generated by them. This is explained in details in the section 4.3 of this chapter.

Sampling technique: Convenient sampling was used as sampling technique for the tourists survey at KNP and MNP. Exit tourists were interviewed to collect the data regarding the classification of the tourist spending. Exit tourists were chosen because only they can give the information about a complete list of spending. In KNP 400 and in MNP 120 exit tourists were interviewed. No sample size determinants was used to take samples in case of tourists because, the tourists were interviewed only for identifying their expenditure pattern.

A structured interview schedule was used as data collection tool from the tourists. There were two parts of the interview schedule. The first part of the interview schedule dealt with the personal information of the respondents. The second part dealt with the different categories and amount of spending of the respondents. Before doing the main survey, a preliminary survey was undertaken where different categories of spending were identified. Therefore, In case of the categories of the spending, close ended questions were put on the basis of the information collected during preliminary survey. For the amount of the spending, open ended questions were used.

It has already been mentioned that the objectives of the tourists survey was to identify the types of business organizations to include in the successive phase of data collection and to act as a base for cross checking the data collected from the business houses regarding tourism revenue and leaked revenue. The study areas of Kaziranga National Park and Manas National Park have a number of business houses viz. tour camps, restaurants, souvenir shops, stationery shops, studio, medicine stall, grocery shops, jewelry shops, electronic items shops, electricity items shops, retail outlets, shoe

shops, wine shops, book stalls, *paan* shops, stationery shops, vegetable vendors, fruits vendors, fish vendors, meat vendors etc. All these do not participate in the tourism business. Tourists survey revealed the areas where they spend and on the basis of this, the types of business organizations to be included in collecting data for Tourism Revenue were identified. By asking the tourists regarding the amount of spending in this study area in different heads, the researcher tried to estimate the average amount of revenue one tourist spend at the tour camps. This estimation was later used as a source for triangulation of tourism revenue calculated after survey of the tour camps.

4.3 Tourism business survey:

For fulfilling the first three objectives, the study undertook a census survey of the tourism businesses operational in the study areas. For estimating Tourism Revenue, Leaked Revenue, and Retained Revenue Lacher and Nepal (*From leakages to linkages* 87-88, Dependency and development 954-56), Lacher (12-17), Sandbrook (*Putting leakages in its place* 128) argued undertaking census survey of tourism businesses operational in the study area. Data were collected during May 2011 to October 2011 for the period November 2010 to April 2011, because, the period November to April is the tourism season for the National Parks, KNP and MNP. One complete tourism season i.e. November 2010 to April 2011 was considered for the study. Data were collected after completion of the tourism season.

There were 70 tour camps³, 12 restaurants, 16 souvenir shops, 2 wine shops, 6 retail outlets, 3 jeep safari, 3 elephant safari, 2 boating services, and 18 tour guides at KNP (Figure 4.1 & 4.2). Out of the 70 tour camps, 64 were operational during the study period. Therefore, the 64 tour camps were considered for the study. Total 126 tourism businesses were operational at KNP and these were surveyed.

At MNP, there were 6 tour camps, 1 jeep safari and 1 elephant safari operational during the study area (Figure 4.3). Therefore total 8 tourism businesses were surveyed for the study.

³Tour camp is that where tourist stayed overnight. It may be hotel, resorts, home stay, lodge, guest house etc. The term was used by Sandbrook (*Putting leakages in its place* 131) to refer a camp where tourists stayed overnight.

Tools for data collection: Data collection tool was a structured interview schedule. A pilot survey of 20 tourism businesses was done for testing the interview schedule before doing the main survey.

Nine sets of structured interview schedules were developed for collecting data from the managers or owners of the tourism businesses, one each for the nine types of service providers viz. tour camps, restaurants, Jeep Safari Association, Elephant Safari Association, souvenir, retail outlets, wine shops, boating service, and tour guides.

The interview schedules consisted of three parts. The first part dealt with the information as name of the working establishment, year of establishment, residence of the owner. The second part dealt with the information regarding the revenue sources and amount of revenue.

The third part dealt with the information regarding different kinds of expenditures and their spatial distribution of the tourism businesses. In this part, the geographical area of spending was identified. It was tried to find out the flow of spending of the tourism business houses to know where expenditure goes spatially (Nepal, *Message to the author*)⁴. Whether it remained in the study area or it flowed outside the study area due to payment for import of goods and services, and wages and salaries paid to non-local employees. If the money was paid to local persons as salaries and wages, for local commodity, for the commodity supplied by the local person, or profits accruing to the local owner, then it was termed as retained revenue. If the money was paid to the non-local people as wages and salaries, for the imported goods and services, and profits accruing to the non-local owners, then it was termed as leaked revenue.

Leaked revenue (LR) was estimated by summing up expenses made for payment of imported goods and services, and payment of wages and salaries of non-local people by the tourism business houses and the remaining was considered the Retained Revenue (RR). If the owner of the tourism business was a non-local actor, then leaked revenue included the profits generated by the business owner. The leakage rate was estimated by using the formula: $\text{Leakage} = (\text{LR} / \text{TR}) * 100$.

⁴ Nepal, Sanjay Kr. Message to the author, 6 December 2010. E-mail.

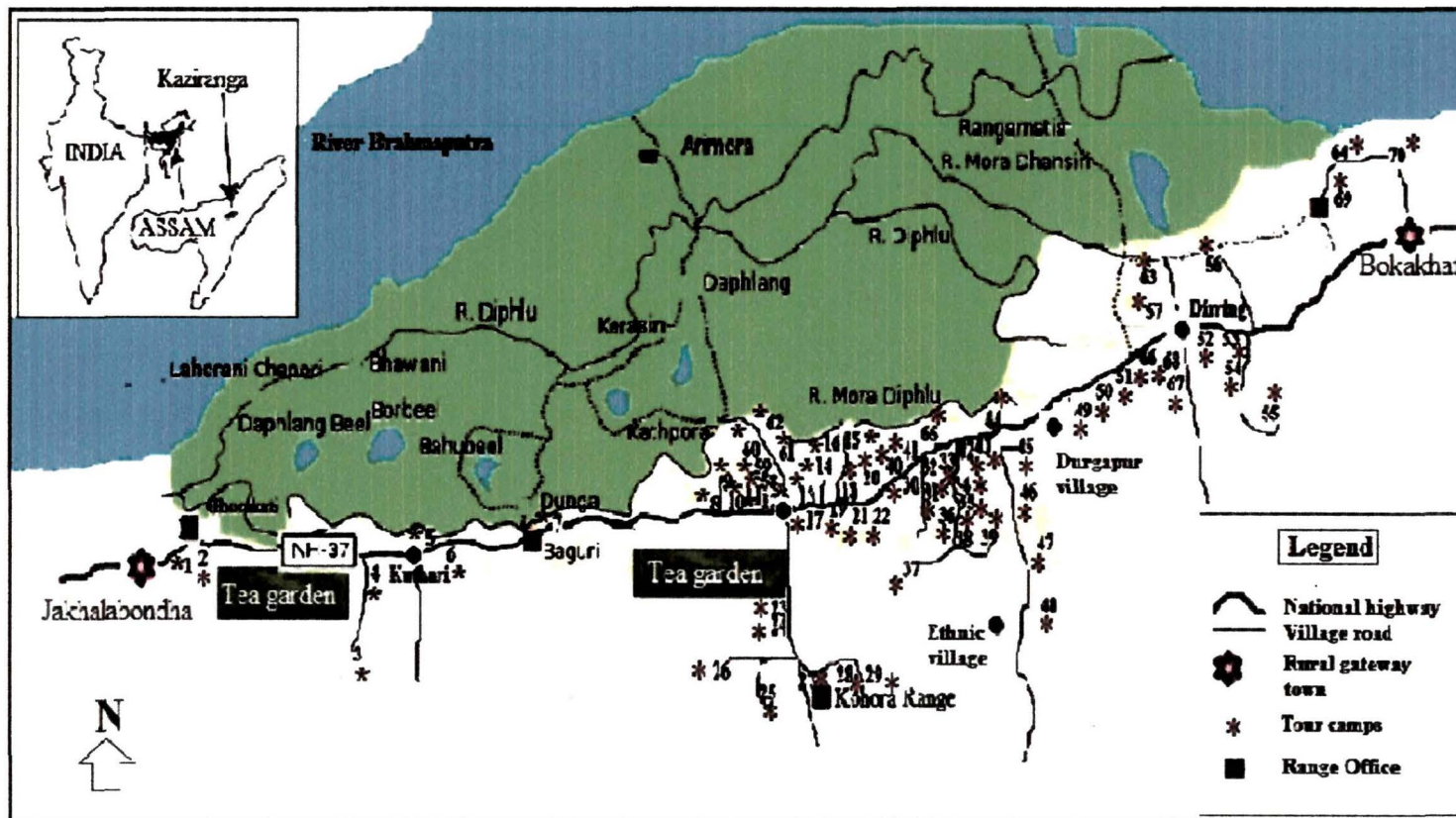


Figure: 4.1: Location of tour camps, KNP

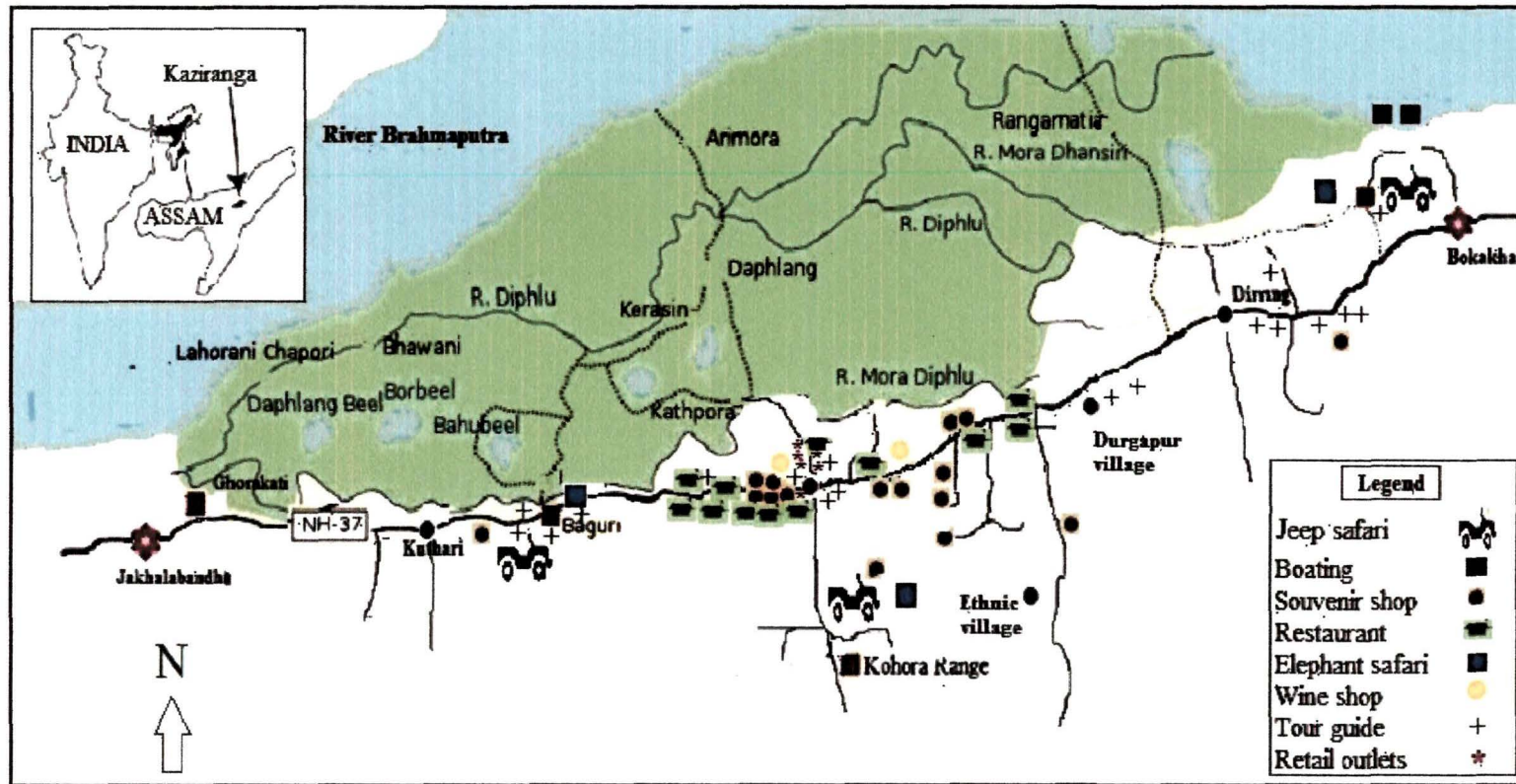


Figure 4.2: Location of tourism businesses other than tour camps, KNP

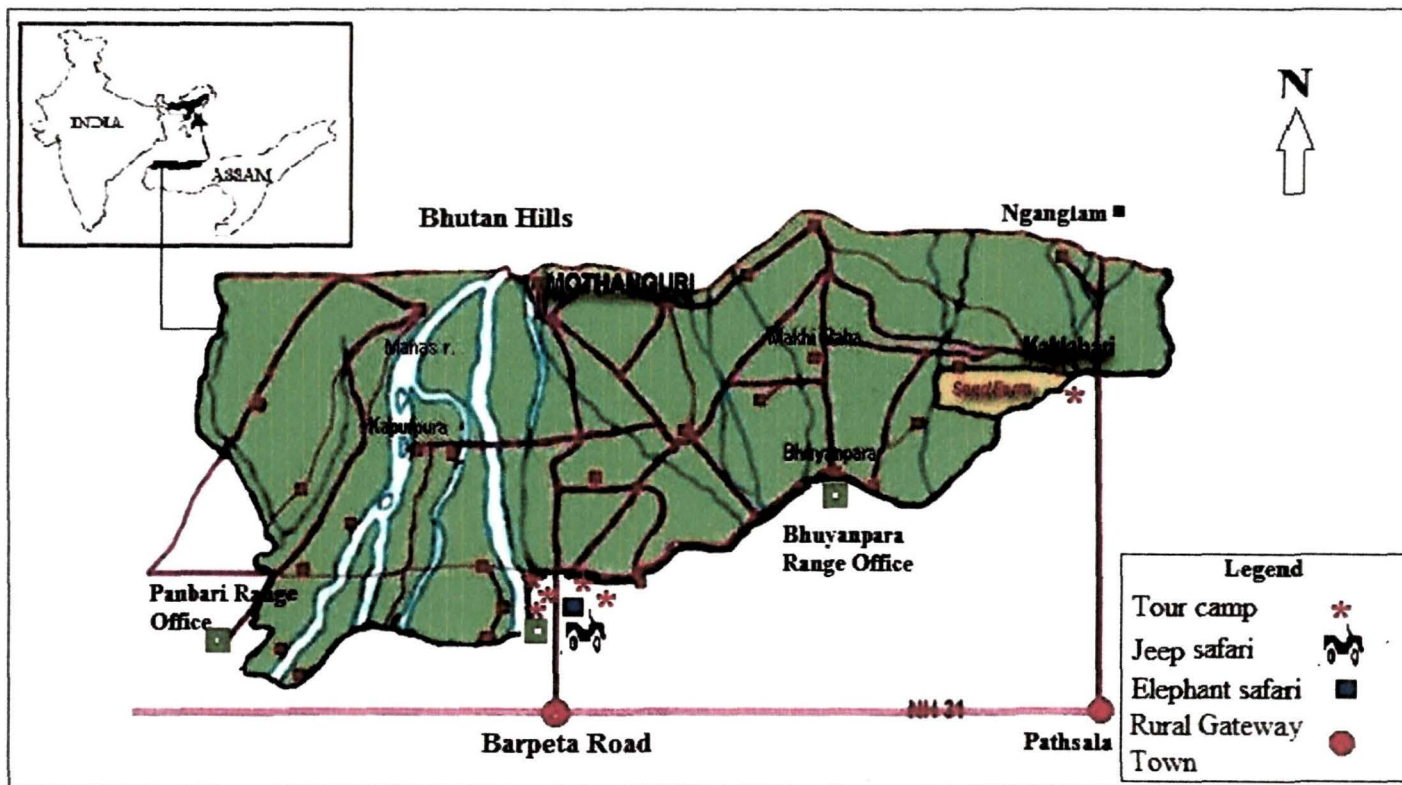


Figure 4.3: Location of the tourism businesses, MNP

It is to be mentioned here that due to lack of records by some business houses, data was collected on the basis of oral testimony, recall, assumption and estimation. This approach was taken from the working of Sandbrook (*Putting leakages in its place* 130) and Walpole and Goodwin (565). For checking the accuracy of the data, they suggested triangulation of the data from different sources.

In this study too, triangulation was made from different sources. The tour camps maintained visitation records. Besides, the local police station as well as the Department of Tourism, Government of Assam, keeps records regarding night campers of each tour camp. Published price lists were available for lodging and food in their respective brochures. One night stay for Indian and two nights stay for the foreigner tourists are regular incidents in both the study areas. These information are sufficient to cross check the data with the data provided by the tour camps regarding Tourism Revenue they generated. Besides, from the tourists' survey, average spending per tourist of a tour camp was estimated and then it was compared with the data provided by the tour camps as it is mentioned in the section 4.2 of this chapter. In case of the tour camps run by NGOs in MNP, the researcher referred to reports prepared by chartered accountants.

During interview regarding Jeep Safari and Elephant Safari, the service providers provided the data on the basis of oral testimony. The Forest Range Offices keep records of the number of Jeeps, Elephants and people (either for Jeep Safari or Elephant Safari) entering the national park. This data was triangulated with the records maintained by the respective Forest Range Offices, Government of Assam, and the published tariff rate of each trip. In case of boating service, souvenir shop, retail outlet and tour guide, the researcher had to rely on the oral testimony provided.

Analysis tool: Only frequency, percentage, and mean were used for analysis. No further analytical tools for observing statistical significance was undertaken since census data were collected. The existing literature argued that there is no need of doing statistical significance test for census data (stackexchange.com: talkstats.com). According to the scholars like Sandbrook⁵, Nepal⁶ and Heinen⁷, for fulfilling the objectives of this study, there is no need of doing such statistical significance test (Messages to the author).

⁵ Sandbrook, Chris. Message to the author. 6 March 2014. E-mail.

4.4 Stakeholder analysis:

Stakeholder analysis can be undertaken in policy making in case of qualitative information (Varvasovszky and Brugha 338; Schmeer 1). For getting qualitative information, unstructured interviews were taken of the stakeholders of KNP and MNP regarding the development of local level strategies compatible to the study areas. Persons with different backgrounds were selected as respondents for stakeholder analysis. The information achieved from the stakeholders provided the base for developing local level strategies for minimizing leakage in KNP and MNP. The lists of stakeholders of KNP and MNP are given the Table 4.2 and Table 4.3 and the lists of the name of the respondents are attached in the Annexure XII

Table 4.2: List of Stakeholders in KNP

-
1. Deputy Director, Tourism, Government of Assam
 2. Deputy Director, Assam Tourism Development Corporation (ATDC)
 3. Ex-Director, Kaziranga National Park
 4. Range Officer, Agoratoli Forest Range.
 5. Tourism Information Officer, ATDC
 6. Secretary, Kaziranga Development and Jeep Safari Association (Kohora Range)
 7. President of Kaziranga Elephant Safari Association (Bagori Range)
 8. President, Bagori Jeep Safari Association.
 9. President, Agoratoli Jeep Safari and Elephant Safari Association.
 10. Owner, Wild grass.
 11. Manager, Landmark Wood.
 12. Owner, Pelican Dhaba,
 13. Owner, Cleans, Souvenir Shop
 14. Owner, Kaziranga Studio, Souvenir shop.
 15. President, *Aparajita*, SHG, Kaziranga and owner of *Kaziranga Haat*, Souvenir shop.
 16. Tour guide (Male)
 17. Tour guide (Female)
 18. President, *Kaziranga Suraksha Samity* and Owner of Home stay.
-

¹ Nepal, Sanjay Kr. Message to the author, 6 March 2014. E-mail.

² Heimin, Joel T. Message to the author, 8 March 2014. E-mail.

Table 4.3: List of stakeholders in MNP

1.	Deputy Director, Tourism, Government of Assam
2.	Deputy Director, Manas Tiger Reserve
3.	Forest Range Officer, Bansbari Range, MNP
4.	Secretary, Florican Cottage, Manas Ever Welfare Society, MNP
5.	Tourism-in-charge, Manas Ever Welfare Society, MNP
6.	President, Manas Maouzigendri Eco-tourism Society
7.	Advisor, Manas Jeep Safari Association, MNP
8.	President, Manas Jeep Safari Association, MNP
9.	President, Manas Elephant Safari Association and the President of the NGO, ANAJAREE.
10.	Owner, Birina (Tour camp)
11.	Manager, Bansbari Lodge
12.	Manager, Manas View Jungle Resort
13.	Academician, Associate Professor, B.U
14.	Village headman, Koklabari, Bhuyanpara Range

The Deputy Director, Department of Tourism, Government of Assam, the Deputy Director, Assam Tourism Development Corporation (ATDC), an Ex-Director, Kaziranga National Park were selected because of their long association with KNP and their present role in developing policy measures for welfare of the people living in the fringe villages of the National Park. Because of their long association with the National Park, they have thorough knowledge about the intricacies of the national park as well as the local population. They have the potential to use this knowledge for suggesting local level strategies to check revenue leakage. The rest of the stakeholders were chosen because they are actively involved either in tourism related activities or in conservation of the national park. They have grass root knowledge about the tourism scenario related to the national park and can contribute to developing local level strategies for leakage reduction to a great extent.

For MNP, the Deputy Director, Department of Tourism, Government of Assam, Deputy Director, Manas Tiger Reserve, Government of Assam, the Range Officer, Bansbari Range were selected because they have long experience of working at MNP. The secretary and the tourism-in-charge of MEWS, the president of MMES have been actively working for the conservation and tourism in MNP. MEWS and MMES have constructed some cottages for providing accommodation to the tourists. Since, they have

experience of working in tourism and conservation, they were selected. The rest of the stakeholders were chosen because they have been involved in tourism related activities in the national park. They have detail knowledge about the tourism scenario related to MNP and can contribute to developing local level strategies for leakage reduction to a great extent.

This is already mentioned that development of local level strategies based on local resources is the main objective of stakeholders' opinion. Only the local people or the people with long experience of attachment with the local area were selected as stakeholders. Tourists were intentionally excluded from stakeholders' opinion as the tourists do not have long attachment with the local area and, therefore, will not be able to suggest local level strategies based on local resources.

4.5 Formulating strategies for increasing local's involvement in tourism:

According to Lacher and Nepal (*Leakages to linkages* 94), having a suitable local-level strategy can greatly increase the economic impact of tourism in peripheral areas. Such local level strategies can reduce leakages, increase local economic development, distribute tourism income throughout the region and turn more local residents into stakeholders in the tourism industry. The local economy should focus on creating such a strategy that suits the unique conditions of the local economy. This was taken into consideration while formulating strategies for increasing local's involvement in tourism. Information gained from literature review and stakeholders analysis were utilized to develop some local level strategies for minimizing leakage of tourism revenue by increasing local residents' involvement in tourism that suits the local condition of KNP and MNP.

It was felt necessary to find out whether the strategies developed are suitable of implementation or not. For studying practicability of the suggested strategies, an experts' panel was formulated. The selected experts were given below in Table 4.4 whose names are provided in the Annexure XIII.

Table 4.4: List of experts in KNP and MNP

Experts for KNP	Experts for MNP
<ul style="list-style-type: none"> • Deputy Director, Tourism, Government of Assam • Ex-Director, Kaziranga National Park • A group of ten members who are actively involved in Tourism Related Activities in KNP 	<ul style="list-style-type: none"> • Deputy Director, Tourism, Government of Assam • Deputy Director, Manas Tiger Reserve • A group of ten members who are actively involved in Tourism Related Activities in MNP

These experts were selected on the basis of their long years of experience in conservation as well as tourism in both KNP and MNP. Because of their long association with both the areas, they have in-depth understanding of the local cultural, natural, and human resources of the areas and proper understanding of the mindsets of the local people.

The suggested strategies were circulated among the three groups of experts in three rounds to find out whether the strategies were feasible and could be sustained over a long period of time. Experts' suggestions and modifications were incorporated in the strategies so that these can be practically implemented.

CHAPTER-V
RESULTS AND
DISCUSSION

**CHAPTER V:
RESULTS AND DISCUSSION**

5.1. Identification each category of tourism business where tourism leakage occurs in KNP

During the census survey of the tourism related businesses houses in KNP, nine different tourism businesses have been identified. They are tour camps, restaurants, souvenir shops, retail outlets, jeep safari, elephant safari, boating services, tour guides and wine shops. The numbers of tourism businesses under different business categories are depicted in the Table 5.1:

Table 5.1: Types of Tourism Businesses in KNP

Sl no	Types of Business	No	Percent
1.	Tour camps	64	50.79
2.	Restaurants	12	9.52
3.	Souvenir shop	16	12.69
4.	Wine shop	2	1.59
5.	Retail outlets	6	4.76
6.	Jeep safari	3	2.38
7.	Elephant safari	3	2.38
8.	Boating	2	1.59
9.	Tour guide	18	14.29
	Total	126	

Out of 9 categories of tourism businesses, the sector dealing in guide service to tourists was found to have retained the full amount of total revenue earned. This is due to the fact that all the tour guides were local. Except tour guides, all categories of tourism businesses experienced leakage.

Coming to tour camps, the lion's share of the tourism revenue was generated by non-local actors. Leakage was also high in case of tour camps owned by non-local actors. Leakage in this sector occurred in terms of profits of the non-local actors, payments of salaries paid to the non-local employees, import of housekeeping materials, grocery, and food items from the rural gateway town, Jakhlabandha, Bokakhat, and Guwahati.

In case of jeep safari, leakage is related to cost of fuel only as the jeep owners were local to the area. In case of elephant safari, out of the three service providers, one was run by Kohora Forest Range Office, one by Bagori Elephant Safari Association, and the third one by Agoratoli Elephant Safari Association. Of these three, the Bagori Elephant Safari Association and Agoratoli Elephant Safari Association are owned by local people. The entire amount of revenue collected by the elephant safari run by the Kohora Forest Office was leakage since the revenue went to the Government. In case of Bagori Elephant Safari Association and Agoratoli Elephant Safari Association, the owners do not own the elephants. They hired the elephants from different parts of the State. Therefore, the rent paid to the elephant owners was leakage.

The souvenir shop owners purchase souvenir items from different parts of Assam and Siliguri of West Bengal. The amount spent on import of souvenir items was a leakage.

The two wine shops were owned by non-local actors. The wine shops imported stock from Guwahati. The staff employed in this businesses were local. Hence, the salary paid to them stayed in the local area. But as the owners of the shops were from outside the area, the profit leaked out as repatriate profit. Hence, the two aspects of this business sector viz. cost of products sold and profit leaked out of the local area.

In case of the retail outlets, though the shops were owned by local actors, the entire raw material were imported from outside the local economy and hence the amount of money spent on imports was leakage. The profit earned by the owners stayed within the local area.

In case of restaurants, out of 12, one was owned by non-local actor. That restaurant purchased raw materials from outside the local economy. Besides, some of the staff members employed were from outside the local economy. Therefore, the amount of import of raw materials, salaries paid to non-local employees, and profit of the owner were leakage. Of course the remaining 11 restaurants were owned by local actors. They also imported some goods related to maintenance of ambience of the restaurants from rural gateway towns. Therefore that amount was a leakage.

In case of boating service, though the businesses were owned by local actors and the staff employed were also local, the cost of fuel to run the boat was a leakage.

5.2 Quantification of approximate amount of leakage of tourism revenue at KNP

It was already explained that the study was based on census survey. The total tourism revenue is the summation of the revenue of all tourism businesses operational in the study area. Since there were 126 tourism business units, total revenue of the tourism business is the result of sum total of the revenue of 126 tourism business units of the study area. Likewise, Leaked Revenue and Retained Revenue of the study area was also found by summing up leakages and retained revenues of all tourism businesses of the study area respectively.

The Tourism Revenue (TR), Leaked Revenue (LR) and Retained Revenue (RR) of the study area were INR 211094380.00 (INR 211.09 million), INR 162844066.00 (INR 162.84 million) and INR 48250314.00 (INR 48.25 million) respectively. The leakage rate was 77.14%. This amount is significant as compared to 90% estimates by Walpole and Goodwin (568), 15% to 61%, and 15% to 48% by Lacher and Nepal (*Dependency and development* 959; *From leakages to linkages* 89) and 78.5%, and 75% by Sandbrook (*Local economic impact* 24; *Putting leakages in its place*, 124).

A summary of the distribution of tourism revenue, retained revenue, and leakages of the study area is shown in the Table 5.2. The table also shows tourism revenue, retain revenue, and leak revenue per capita tourist and local residents respectively.

The revenue per tourist was estimated to be INR 1679.86. Out of that, INR 383.96 was retained and INR 1295.85 was leaked. Looking at the scenario from the local population point of view, the distribution of TR per local resident was INR 5350.26. Out of this, INR 1222.92 was retained and INR 4127.34 was leaked.

It should be noted here that tourism businesses are mostly concentrated in Kohora Range. In case of other ranges, people are still not adequately aware about tourism business. The TR, LR and RR of different tourism business are discussed below:

Table 5.2: Tourism scenario of KNP

Heads	Amount/Rate
Annual Revenues	
Tourism Revenue	INR 211094380.00
Leaked Revenue	INR 162844066.00
Leakage rate	77.14%
Retained Revenue	INR 48250314.00
Retention rate	22.86%
Tourists	125666*
Population	39455**
Tourist per capita	
Revenue	INR 1679.86
Leakage	INR 1295.85
Retention	INR 383.96
Resident per capita	
Revenue	INR 5350.26
Leakage	INR 4127.34
Income	INR 1222.92
Revenue sources	
Tour camps	INR 167689607
Restaurants	INR 4539000
Souvenir shop	INR 4912700
Retail outlet	INR 1488720
Wine shop	INR 650,000
Jeep safari	INR 16671450
Elephant safari	INR 13438903
Guide service	INR 714,000
Boating	INR 990,000

Note: *Census Report, 2011, ** Tourism Department, Government of Assam
 \$US 1= 45 Indian Rupee (March 2011)

Among the different sectors of tourism business, the tour camps earned the maximum revenue (INR 167689607.00, approx. INR 167.69 million) during the period of the study. This is the highest contribution (74.6%) to total tourism revenue in the study area as it is shown in the Table 5.3. It is followed by Jeep safari (INR 16671450.00, approx. INR 16.67 million, 7.43%), elephant safari (INR 13438903.00, approx. INR 13.44 million, 5.98%), souvenir (INR 4912700.00, approx. INR 4.91 million, 2.19%), restaurants (INR 4539000.00, approx. INR 4.54 million, 2.02%), retail outlets (INR 1488720.00, approx. INR 1.49 million, 0.66%), boating (INR 990000.00, approx. INR

0.99 million, 0.44%), tour guide (INR 714000.00, approx. INR 0.71 million, 0.32%), and wine shops (INR 650000.00, approx. INR 0.65 million, 0.29%).

Coming to revenue leakage, it has been found that it is the highest in tour camps (INR 142337103.00, approx. INR 142.34 million) followed by elephant safari (INR 8210853.00, approx. INR 8.21 million), jeep safari (INR 7137750.00, approx. INR 7.13 million), retail outlets (INR 1165000.00, approx. INR 1.17 million), restaurant (INR 707600.00, approx. INR 0.71), wine shops (INR 598400.00, approx. INR 0.59 million), and boating (INR 67500.00, approx. INR 0.07 million). This is shown in Figure 5.2.

Business related to guidance of the tourists did not have any leakage because all the tour guides were local people and the revenue generated by them stayed with them. In terms of percentage, the highest leakage rate was found in wine shops (92.06 %) followed by tour camps (84.88%), retail outlets (78.26%), elephant safari (61.09%), souvenir (53.32%), Jeep safari (42.81%), restaurant (15.59%), boating (6.82%) and tour guide (0%). Though the leakage rate is highest in case of wine shops, the contribution of it on tourism revenue is just 0.29%. Likewise, though the leakage rate is very high in case of retail outlets i.e. 78.26%, the contribution of retail outlets into tourism revenue is just 0.66%. Thus, the leakage of these two categories of tourism businesses did not have much impact on overall leakage.

Lacher and Nepal (*From leakages to linkages 89; Dependency and development 959*) found 30% to 50%, 31% to 64%, 0% to 8% and 8% in restaurants, souvenirs, tour camps, and guide service respectively in their study undertaken in the three villages of Northern Thailand.

In case of restaurants, leakage rate (15.59%) is not high compared to that found in the studies undertaken by Lacher and Nepal (*From leakages to linkages 89; Dependency and development 959*). This was because all the restaurants except one, were owned by local people and the locally owned restaurants preferred local raw materials and employed local youths. In case of souvenir, the leakage rate was not so different from that found in case of above mentioned studies. In case of tour camps, the leakage rate was far higher in case of KNP compared to that found in the above mentioned studies.

Table 5.3 Overall TR, LR and RR in KNP

Tourism Business	No	TR (INR)	Share in the total tourism revenue of each tourism business (%)	LR (INR)	RR (INR)	LR rate (%)
Tour camps	64	167689607.00	74.61	142337103.00	25352504.00	84.88
Restaurants	12	4539000.00	2.02	707600.00	3831400.00	15.59
Jeep safari	3	16671450.00	7.43	7137750.00	9533700.00	42.81
Elephant safari	3	13438903.00	5.98	8210853.00	5228050.00	61.09
Souvenir	16	4912700.00	2.19	2619860.00	2292840.00	53.32
Retail outlet	6	1488720.00	0.66	1165000.00	323720.00	78.26
Wine shop	2	650000.00	0.29	598400.00	51600.00	92.06
Boating	2	990000.00	0.44	67500.00	922500.00	6.82
Tour guide	18	714000.00	0.32	0	714000.00	0
Total	126	211094380.00		162844066.00	48250314.00	77.14

In case of tour guide, the leakage rate in KNP was nil whereas it was 8% in *Tom Lod* village of Northern Thailand found in the studies undertaken by Lacher and Nepal (*From leakages to linkages* 89; *Dependency and development* 959).

5.2.1 Leakage of tour camps:

In the survey, it was found that the 64 tour camps had a capacity of 518 rooms and 1122 beds. Out of 64 tour camp. 40 (62.5%) were owned by local actors and 24(37.5%) by non-local actors. But the tour camps owned by local actors had less number of rooms and beds compared to that owned by people from outside the local area. The local actors had a capacity of 207 (39.96%) rooms and 428 (38.15%) beds, whereas the tour camps owned by non local actors had a capacity of 311 (60.04%) rooms and 694 (61.85%) beds. As a result, though the non-local actors had less number of tour camps compared to that of local actors, tour camps owned by non-local actors had the capacity to accommodate more tourists. This is shown in Table 5.4.

Table 5.4: Tour camps with capacity at KNP

Ownership	No of tour camps	Rooms	Beds
Local	40 (62.5)	207 (39.96)	428 (38.15)
Non-local	24 (37.5)	311 (60.04)	694 (61.85)
Overall	64	518	1122

Note: Figures in the parentheses denote percentage

TR, LR and RR based on Tariff class:

As per categorization of tour camps on the basis of tariff class is concerned, the tour camps were divided into four categories viz. tour camps with tariff 'below INR 1000' per night, tour camps with tariff falling between INR '1000-2000' per night, tour camps with tariff falling between INR '2000-3000' per night, and tour camps with tariff 'INR 3000 and above' per night. The breakup of the tour camps at KNP under different categories of tariff is shown in Table 5.5.

Table 5.5: Residence wise tariff class of tour camps, KNP

Tariff class (INR)	No of tour camps owned by local actors	No of tour camps owned by non-local actors	Total
Below 1000	27 (84.38)	5 (15.63)	32 (50)
1000-2000	11 (50)	11 (50)	22 (34.38)
2000-3000	2 (33.33)	4 (66.67)	6 (9.38)
3000 and above	0 (0)	4 (100)	4 (6.25)
Total	40	24	64

Note: Figures in the parentheses denote percentage

Among the four kinds of tariff plan, INR '3000 and above' had highest amount of TR (INR 88904800.00, approx. INR 88.90 million, 53.02%) followed by INR '1000-2000' (INR 44783124.00, approx. INR 44.78 million, 26.71%), and INR '2000-3000' (INR 17257773.00, approx. INR 17.26 million, 10.29%) and 'below INR 1000' (INR 16743910.00, approx. INR 16.74 million, 9.99%). It is depicted in Table 5.6.

Table 5.6: Tariff class wise TR, LR and RR of tour camps, KNP

Tariff class per room (INR)	No	TR (INR)	LR (INR)	RR (INR)	Leakage Rate (%)
Below 1000	32 (50.00)	16743910 (9.99)	7264748	9479162	43.39
1000-2000	22 (34.38)	44783124 (26.71)	36291055	8492069	81.04
2000-3000	6 (9.38)	17257773 (10.29)	14787165	2470608	85.68
3000 and above	4 (6.25)	88904800 (53.02)	83994135	4910665	94.48
Total	64	167689607	142337103	25352504	84.88

Note: Figures in the parentheses denote percentage

Accordingly, the tariff plan INR '3000 and above' had highest amount of Leakage (INR 83994135.00, approx. INR 83.99 million) followed by INR '1000-2000' (INR

36291055.00, approx. INR 36.29 million), INR '2000-3000' (INR 14787165.00, approx. INR 14.79 million) and 'below INR 1000' (INR 7264748.00, approx. INR 7.26 million) which are depicted in the Table 5.6. The percentage of leakage is also highest (94.48%) in camps whose tariff plan is INR '3000 and above' followed by tariff plan INR '2000-3000' (85.68%), tariff plan INR '1000-2000' (81.04%), and tariff plan INR 'below 1000' (43.39%).

Thus it is seen that the tour camps with lower tariff plan had lower percentage of leakage and tour camps with higher tariff plans had higher rate of leakage. This is because, the tour camps with lower tariff plans were owned by local actors and the tour camps with higher tariff plans were owned by non-local actors (Table 5.5). Accordingly retained revenue in tour camps with tariff plan INR 'below 1000' was the highest (INR 9479162.00, approx. INR 9.48 million), followed by tour camps with tariff plan INR '1000-2000' (INR 8492069.00, approx. INR 8.49 million), INR '3000 and above' (INR 4910655.00, approx. INR 4.91 million) and tour camps with tariff plan INR '2000-3000' (INR 2470608.00, approx. INR 2.47 million). It is seen in Table 5.5 that there were 32 tour camps under the tariff plans INR 'below 1000', out of which 27 (84.38%) were owned by local actors and only 5 (15.63%) were owned by non-local actors. Likewise, there were 22 tour camps under the tariff plan INR '1000-2000' out of which 11 (50%) were owned by local people and the rest were owned by non-local people. There were 6 tour camps under the tariff plan INR '2000-3000' out of which only 2 (33.33%) were owned by local people and 4 (66.67%) were owned by non-local people. There were 4 tour camps under the tariff plan INR '3000 and above' but none were owned by local people.

TR, LR and RR of tour camps based on local and non-local ownership:

It is already mentioned in the section 5.2.1 of this chapter that out of 64 tour camps, 40 were owned by local actors and 24 by non-local actors. But tour camps owned by non-local actors generated more tourism revenue. The tour camps owned by local actors generated INR 15929495.00 (approx. INR 15.93 million) whereas the tour camps owned by non-local actors generated INR 151760112.00 (approx. INR 151.76 million) as it is depicted in Table 5.7. Thus, the tour camps owned by the local actors generated only

9.5% of the total revenue whereas the tour camps owned by the non-local actors generated 90.5% of the total tourism revenue.

Table 5.7: TR, LR, and RR of tour camps, KNP

Ownership	No.	TR (INR)	LR (INR)	RR (INR)	LR Rate (%)
Local	40 (62.5)	15929495 (9.50)	1945130	13984365	12.21
Non-local	24 (37.5)	151760112 (90.50)	140391973	11368139	92.51
Overall	64	167689607	142337103	25352504	84.88

Note: Figures in the parentheses denote percentage

The leaked revenue of the tour camps owned by local actors was INR 1945130.00 (approx. INR 1.95 million) and the leakage rate was just 12%, whereas the leaked revenue of the tour camps owned by non-local actors was INR 140391973.00 (approx. INR 140.39 million) and the leakage rate was 93%. This indicates that the tour camps owned by the non-local actors had much more leakage compared to that of the tour camps owned by the local actors.

Accordingly, the retained revenue of the tour camps owned by local actors was INR 13984365.00 (approx. INR 13.98 million) whereas it was INR 11368139.00 (approx. INR 11.37 million) in case of the tour camps owned by the non-local actors. This indicates that the tour camps owned by local actors had more retained revenue compared to that of the tour camps owned by the non-local actors.

We get leakage in case of the tour camps owned by the local actors because, some of the local tour camps have a tendency to employ non-local people in their businesses and to import housekeeping items and grocery items from the rural gateway towns though these items are available in the local market.

In case of the tour camps owned by non-local actors, we get leakage because the tour camps employed non-local people in their firms, imported housekeeping items, grocery items, and vegetables from rural gateway towns. Remittances of non-local employees as salaries and wages and the profits of the firms owned by non-local actors were included in the leakage.

5.2.3 Leakage of restaurants:

There were 12 restaurants around KNP generating revenue amounting to INR 4539000.00 (approx. INR 4.53 million) during the time of the study and it was 2.02% of the total tourism revenue of KNP. The LR and RR of the restaurants were INR 707600.00 (approx. INR 0.71 million) and INR 3831400.00 (approx. INR 3.83 million) respectively as it is depicted in Table 5.8. The leakage rate was just 15.59%. This is because, out of the 12 restaurants, only 1 restaurant was owned by the non-local actors and the restaurants owned by local actors prefer locally available commodities and raw materials. Besides, the restaurants with local ownership prefer local people for its working staff.

Table 5.8: TR, LR and RR of restaurants, KNP

Typed of ownership	No of the business	TR (INR)	LR (INR)	RR (INR)	LR rate (%)
Local	11 (91.66)	4095000 (90.22)	323600	3771400	7.9
Non-local	1 (8.33)	444000 (9.78)	384000	60000	86.49
Total	12	4539000	707600	3831400	15.59

Note: Figures in the parentheses denote percentage

The TR, LR and RR of the restaurants owned by the local actors were INR 4095000.00 (approx. INR 4.09 million), INR 323600.00 (approx. INR 0.32 million) and INR 3771400 (approx. INR 3.77 million) respectively and the leakage rate was 7.9%. The leakage is found because some restaurants owned by the local actors import grocery and housekeeping items from the rural gateway towns. Besides, in case of the restaurants owned by the local actors, leakage occurred by way of repatriated salaries and wages paid to the non-local employees.

The TR, LR and RR of the restaurant owned by the non-local actor were INR 444000.00 (approx. INR 0.44 million), INR 384000.00 (approx. INR 0.38 million) and INR 60000.00 (approx. INR 0.06 million) respectively and the leakage rate was 86.49%. The very high amount of leakage is due to the repatriate profits of the owner and repatriates salaries of the non-local employees.

However, different studies (Borkotoky and Goswami 7, Goswami, *Feasibility study* 26) have identified that the local youth are skilled enough to be employed in the restaurant sector. Moreover, even if they lack skill, training programmes can be organized to make them employable and thereby reduce leakage.

5.2.4 Leakage of jeep safari:

There are three jeep safari services in Kaziranga National Park. The Bagori Jeep Safari Association is located at Bagori Range, the Kaziranga Development and Jeep Safari Association is located at Kohora Range, and the Agoratoli Jeep Safari Association is located at Agoratoli Range. Each owner of a jeep has to take membership of the association. There is an administrative body elected from the members of the jeep safari associations. The body monitors the trips. Each member gets equal chance to provide the service on rotation basis. Therefore, each owner of the jeep safari gets more or less equal revenue from jeep safari. The TR, LR and the RR of the jeep safari services were INR 16671450.00 (approx. INR 16.67 million), INR 7137750.00 (approx. INR 7.14 million) INR 9533700.00 (approx. INR 9.53 million) respectively and the leakage rate was 42.81% as it is shown in Table 5.9. This leakage was due to fuel cost.

Table 5.9: TR, LR and RR of jeep safaris, KNP

Name of the jeep safari	TR (INR)	LR (INR)	RR (INR)	LR rate (%)
Bagori Jeep safari association	5292500 (31.75)	4037500	1255000	76.29
Kaziranga development and jeep safari association	8210950 (49.25)	2308250	5902700	25.00
Agoratoli Jeep safari association	3168000 (19.00)	792000	2376000	28.11
Total	16671450	7137750	9533700	42.81

Note: Figures in the parentheses denote percentage

5.2.5 Leakage of elephant safari:

There are three elephant safari providers in KNP. Out of the three, one is run by the Park Authority and the others are provided by local people. Of these two, one is located at Bagori Range and the other at Agoratoli Range. The TR, LR and RR of the elephant safari in KNP were INR 13438903.00 (approx. INR 13.44 million), INR

8210853.00 (approx. INR 8.21 million) and INR 5228050.00 (approx. INR 5.23 million) respectively and the leakage rate was 61.09% as it is shown Table 5.10. The TR, LR and RR of the elephant safari provided by the Kohora Range authority were INR 5210053.00 (approx. INR 5.21 million), INR 5210053.00 (approx. INR 5.21 million) and INR 0 respectively. The leakage rate was 100 per cent. The reason behind 100 per cent leakage was that the whole amount of revenue collected from elephant safari was repatriated to the Government fund.

Table 5.10: TR, LR and RR of elephant safaris, KNP

Name of the elephant safari	TR (INR)	LR (INR)	RR (INR)	LR rate (%)
Elephant safari owned by park authority	5210053 (38.77)	5210053	0	100
Bagori elephant safari	8064000 (60.00)	2918400	5145600	36.19
Agoratoli elephant safari	164850 (1.23)	82400	82450	49.98
Total	13438903	8210853	5228050	61.09

Note: Figures in the parentheses denote percentage

On the other hand the TR, LR and RR of Bagori Elephant Safari Association were INR 8064000.00 (approx. INR 8.06 million), INR 2918400.00 (approx. INR 2.92 million) and INR 5145600.00 (approx. INR 5.15 million) and the leakage rate was 36.19%. Accordingly, the TR, LR and RR of Agoratoli Elephant safari association were INR 164850.00 (approx. INR 0.16 million), INR 82400.00 (approx. INR 0.08 million) and INR 82450.00 (approx. INR 0.08 million) and the leakage rate was 49.98%. The leakage occurred in case of Bagori and Agoratoli elephant safari associations because the service providers do not have their own elephants for elephant safari. They have to hire the elephants from other parts of the State. The amount of leakage cannot be avoided because the service providers have no option but to hire the elephants. Accordingly, the *mahut* (elephant trainer) come with the respective elephant. Therefore there is no scope to local people to perform as *mahut* in the elephant safari. The position of *mahut* is such that it cannot be created by giving training. Mostly, it is a hereditary profession. Besides, the *mahuts* are not paid any salary by the Elephant Safari Association. They are paid by the

elephant owners. The *mahuts* are paid ration for food. That amount is spent in the local market and hence that amount is retention.

5.2.6 Leakage in the souvenir sector:

There were 16 souvenir shops in KNP out of which 4 (25%) were owned by non-local actors and 12 (75%) were owned by local actors. The TR, LR and RR of the souvenir shops were INR 4912700.00 (approx. INR 4.91 million), INR 2619860.00 (approx. INR 2.62 million) and INR 2292840.00 (approx. INR 2.29 million) and the leakage rate was 53.32% as it is shown in Table 5.11.

Table 5.11: TR, LR and RR of Souvenir shops, KNP

Types of ownership	Number	TR (INR)	LR (INR)	RR (INR)	LR rate (%)
Local	12 (75)	2945700 (59.96)	1068860	1876840	36.29
Non-local	4 (25)	1967000 (40.04)	1551000	416000	78.85
Total	16	4912700	2619860	2292840	53.32

Note: Figures in the parentheses denote percentage

The TR, LR and RR of the souvenir shops owned by non-local actors were INR 1967000.00 (approx. INR 1.97 million), INR 1551000.00 (approx. INR 1.55 million) and INR 416000.00 (approx. INR 0.42 million) and the leakage rate was 78.85 %. The TR, LR and RR of the souvenir shops owned by local actors were INR 2945700.00 (approx. INR 2.95 million), INR 1068860.00 (approx. INR 1.07 million) and INR 1876840.00 (approx. INR 1.88 million) respectively and the leakage rate was 36.29 %. Out of the 12 souvenir shops owned by local actors only one souvenir shop was there which produced its saleable items itself. That souvenir shop alone generated INR 700000.00 (approx. INR 0.70 million) as TR out of which INR 110000.00 (approx. INR 0.11 million) was LR and INR 590000.00 (approx. INR 0.59 million) was RR and the leakage rate was just 15.71%. Except this souvenir shop, all other souvenir shops imported products from Guwahati and other states like West Bengal. The encouraging thing is that the locals generated more than 59% of the total revenue generated by the souvenir shops.

It was found that the souvenir shops owned by the non-local actors spent considerable amount of money for imports. Accordingly, the souvenir shops owned by the local actors also spent on imports. Literature review revealed that the tourists coming to KNP have strong demand for local souvenir items (Borkotoki and Goswami 6; Borkotoki 107). In that situation the local souvenir shops should promote only local crafts and handloom items. Out of the 16 souvenir shops, 4 were owned by the non-local people. But still there was very high rate of leakage (53.32%) in souvenir shops. The leakage in the souvenir shops in terms of imports of items sold can be minimized by preferring local products and encouraging local craftsmen and weavers to produce according to the demand and skills. Besides, the encouragement to the local entrepreneurs will also reduce leakage.

5.2.7 Leakage in the tour guides sector:

In KNP, there were 18 tour guides offering services to the tourists. The TR of the tour guides were INR 714000.00 (approx. INR 0.71 million). The whole amount of TR is also RR since no leakage was found in that segment. This is because all the guides were local. Out of the 18 tour guides, 4 were operating at Bagori Range, 13 at Kohora Range and 1 at Agoratoli Range. The tour guides at Bagori generated INR 144000.00 (approx. INR 0.14 million, 20.17%) as tourism revenue. The tour guides at Kohora generated INR 534000.00 (approx. INR 0.53 million, 74.79%), and the tour guides at Agoratoli generated INR 36000.00 (approx. INR 0.04 million, 5.04%).

5.2.8 Leakage of retail outlets:

There were 6 retail outlets located at Kohora Range. These were all owned by local actors. The TR, LR and RR of the shops were INR 1488720.00 (approx. INR 1.49 million), INR 1165000.00 (approx. INR 1.17 million) and INR 323720.00 (approx. INR 0.32 million) and the leakage rate was 78.26%. These outlets generally sell manufactured garments, cosmetics, biscuits, cigarettes, stationery items, *paan* etc. Since, the local area is not equipped with necessary infrastructure to produce such items, there is no other option for the shops. Thus, leakage occurred in this category of tourism business due to import of saleable items.

5.2.9 Leakage in case of wine shops:

It has been mentioned earlier that there were two wine shops at Kohora. The TR, LR and RR of the wine shops were INR 650000.00 (approx. INR 0.65 million), INR 598400.00 (approx. INR 0.59 million) and INR 51600.00 (approx. INR 0.05 million) and the leakage rate was 92%. The reason of high rate of leakage was that the branded Indian Made Foreign Liquor (IMFL) is to be imported and both the wine shops were owned by non-local actors. Leakage occurred in terms of profits and expenses incurred in inventory. The revenue retention happened due to payment of salaries of the employee taken from local source.

5.2.10 Leakage of Boating:

In KNP there were only two boating services at Agoratoli Range provided by the local actors. The TR, LR and RR of the boating services were INR 990000.00 (approx. INR 0.99 million), INR 67500.00 (approx. INR 0.07 million) and INR 922500.00 (approx. INR 0.92 million) respectively and the leakage rate was 6.82%. This leakage rate was due to cost of fuel. This kind of leakage cannot be avoided since fuel cost is unavoidable.

5.2.11 Leakage and retention in salary:

To find out the possibility of making local people involved in the tourism sector, it has been tried to find out the ratio of local versus non-local people in tourism businesses. During the census survey of the tourism related business houses, it has been found that out of 956 employees 692 were from the local area and 264 were non-local.

At KNP, 264 people were employed from outside the study area and they repatriated INR 6936000.00 (approx. INR 6.94 million) as salaries and wages in the study period (Table 5.12). Therefore this amount is a leakage which can be avoided by employing local people. The whole amount of salaries and wages paid to the non-local employees are leakage since the amount is not spent in the local economy. Their salaries and wages are repatriated. They need not spend anything from salaries and wages since

accommodations, meals, and medical treatment are provided by the employers to the employees.

It is seen that in case of tour camps and restaurants, though the number of business units owned by the non-local actors are less than that owned by the local actors, they have higher amount of repatriated salaries and wages amounting INR 6604800.00 (approx. INR 6.60 million) and INR 189000.00 (approx. INR 0.19 million) respectively. Though the tour camps and the restaurants owned by the local actors have fewer amounts of repatriated salaries and wages, it is significant that even the tourism businesses owned by the local actors also prefer non-local people for their business establishments. The leaked salaries and wages from the tour camps and restaurants owned by the local actors were INR 117000.00 (approx. INR 0.12 million) and INR 25200.00 (approx. INR 0.03 million) respectively. The reason of being higher amount of leaked salaries and wages were that the non-local employees were paid more compared to the local employees. The average salary of the local employees was just INR 2705.00 where as the average salary of the non-local employees was INR 4379.00.

Table 5.12: Leaked and Retained Salaries in different tourism businesses, KNP

Tourism Business	Local /non-local	No of Business	Local employee	Retained Salaries (INR)	Average retained salary (INR)	Non local employee	Leaked Salaries (INR)	Average Leak salaries (INR)
Tour camps	Local	40	123	1540400	1789.08	6	117000	3250.00
	Non-local	24	401	6768600	2813.22	250	6604800	4403.20
	Overall	64	524	8309000	2642.81	256	6721800	4376.17
Restaurants	Local	11	37	431000	1941.44	1	25200	4200.00
	Non-local	1	5	69000	2300.00	7	189000	4500.00
	Overall	12	42	500000	1984.13	8	214200	4462.50
Jeep safari	Local	3	66	966000	2439.39	0	0	0
Elephant safari	Local	3	5	64000	2133.33	0	0	0
Souvenir	Local	12	16	264000	2750.00	0	0	0
	Non-local	04	05	186000	6200.00	0	0	0
	Overall	16	21	450000	3571.43	0	0	0
Retail shop	Local	6	3	54000	3000.00	0	0	0
Wine shop	Local	2	3	42600	2366.67	0	0	0
Boating	Local	2	10	130000	2166.67	0	0	0
Tour guide	Local	18	18	714000	6611.11	0	0	0
Total		126	692	11229600	2704.62	264	6936000	4378.79

5.3 Identification of causes of leakage at KNP

The discussion so far dealt in the areas where revenue leakage occurs and quantification of leakage. This fulfils the first and second objectives of the study. To fulfil the third objective, i.e. identifying the cause of revenue leakage, analysis was done to identify the reason behind leakage of revenue. It has been found that the tour camps owned by local actors purchased all food items from the local market whereas the tour camps owned by non-local actors preferred rural gateway. Most of the tour camps owned by non-local actors preferred to purchase house keeping items, grocery items and even vegetable and other food items from rural gateway towns. They had the presumption that the local commodities are not hygienic, are irregular in supply, and of low quality. Even in areas such as agriculture, handicraft items, handloom items, craft work items where linkages of local resources with tourism industry would appear simple, they often do not occur, and local economy suffers from high leakages.

However, the reasons for the high leakage of tourism revenue in KNP are multifaceted. Some of the main reasons were the lack of local ownership and availability of capital, lack of local employment, lower salaries to local employees, and inability to link the local economy to the tourism industry. In the following section, a discussion of different factors that lead to leakages is presented.

5.3.1 Lack of local ownership and availability of capital:

Local ownership of the tourism businesses is crucial for development of the local economy as the owners has the potentiality to retain a major share of the profit from the business in the local economy. Local ownership not only checks tourism revenue from leakage, but also reduces leakage by employing more locals and purchasing locally produced goods (Lacher and Nepal, *Leakages to linkages* 80; Milne 499). In KNP, dominance of non-local business houses in the accommodation sector is one of the causes of leakage of tourism revenue. The tourism businesses which are owned by the non-local actors are big farms with linkage with the tour operators at different regions of the country and abroad. The local people do not have sufficient capital to establish large accommodation houses or tourism businesses.

5.3.2 Lack of local employment

It is argued by number of scholars that local employment has a strong effect on decreasing leakages as wages are generally not leaked (Lacher and Nepal, *From leakages to linkages* 81; Milne 500, 508; Hemmati and Koehler). It was found in the studies undertaken by Lacher and Nepal (*From leakages to linkages* 81), Briton (333), Hemmati and Koehler and Mbiawa (*Enclave Tourism* 165) that large tourism businesses frequently import skilled labour from urban areas to staff in different positions. In KNP too, the tourism businesses owned by the non-local actors preferred non-local people to employ, especially in the top positions. Out of 956 total employees, 692 are local employees and 264 are non-local employees. Though there is high potentiality to engage local people in all positions, it is unfortunate that the employers engaged non-local people. Even in the unskilled positions they employed non-local people. It was found that apart from a few tour camps, the majority engaged non-local people in the position like managers, assistant managers, front office managers though the local people had the level of skill and capacity to be absorbed in such positions. It was found in the study that even some tour camps owned by local actors engaged non-local people (Table No 5.12). Of course, except the tour camps, the other kinds of tourism businesses owned by the local actors appointed entirely local people as working staff.

5.3.3 Lower salaries to local employees:

Salaries and wages are important factors that determine leakage. Higher salaries and wages to the local employee have a strong effect on decreasing leakages. Literature survey (Lacher and Nepal, *From leakages to linkages* 81) shows that tourism businesses, especially owned by non-local people, generally employ local people in unskilled positions and paid several times less than the amount paid to non-local employees. In the study it is found that the local employees were paid less salaries compared to the non-local employees. The per capita salary of the local employee was just INR 2705.00 per month where as the per capita salary of the non-local employee was INR 4379.00 per month (Table No 5.12). This can be regarded as another cause of leakage because if both the categories of employees were paid equally, more revenues would have retained.

5.3.4 Lack of ability to link local resources to tourism

It is a general trend that peripheral areas are unable to supply the tourism industry with goods it needs at a comparative price (Lacher and Nepal, *From leakages to linkages* 82). Therefore such areas have to import required goods from other areas. Even in areas where linkages would appear simple, such as agriculture, they often do not occur (Lacher and Nepal, *From leakages to linkages* 82; Belisle 503; Telfer and Wall 641; Torres 547). This happens in KNP too. The tour camps, souvenir shop, restaurants import their required goods from the rural gateway towns. This study identified some of the areas where level of linkage was found to be low. They are discussed below:

Lack of linkage of local agricultural product:

The people living in the fringe villages of KNP were involved in different activities viz farming, fishing, animal husbandry and business (Heinen and Srivastava. *A Microsite Analysis of Resource* 9). Goswami (*Feasibility study* 14) also found that the people living around KNP were basically involved in agriculture, private business and a few in Government services. In this study also it is found that the people living in the fringe villages of KNP were involved in different agricultural activities and allied sectors viz. animal husbandry, poultry farming, fish harvesting etc. But still the tour camps, especially owned by the non-local actors, had the tendency to import agricultural commodities from the rural gateway.

Lack of linkage of local culture and tradition:

It was found that the local people of KNP are very rich in their diversified culture and tradition. The area is mostly dominated by tribal population with their distinctive culture and tradition. This is the place where many communities like *Karbi, Mishing, Tea Tribe, Nepali, Koch, Bengoli, Ahom* etc. live with their own tradition and culture. Folk songs and dances like *Oinitom* of Mishing community, *Jhumur* and *Rong* of tea tribe are very interesting. Though, there is ample potentiality to link these culture and tradition to tourism, these are yet to be promoted. Due to the lack of awareness, these people are not being able to generate and retain tourism revenue.

Lack of linkage of local skill and craft work:

The population of the villages surrounding KNP are skilled in craftwork (Goswami, *Feasibility study* 26). Even the women folk of the area are very efficient in different skills viz. weaving, cooking, knitting, production of decorative items, singing and bamboo work (Borkotoky and Goswami 4). The concern is that the tour camps appoint non-local people for the positions that can be filled by local people. The souvenir shops specially owned by non-local actors do not purchase local crafts and handloom items from the local people. Rather they import these items from Guwahati and rural gateway towns.

Poor marketing linkage of local actors:

The tour camps owned by non-local actors have strong marketing linkage with leading tour agents of the country for which they easily get sufficient number of tourists as guests for their tour camps. Besides, they maintain their website from which the tourists get enough information regarding the places of interest, quality of the lodging and food, and facility of leisure and sports. They have the facility of online and telephonic booking systems. On the other hand, the tour camps owned by local actors do not have market linkage. Therefore, they are incapable of utilizing their optimum capacity of lodging.

5.4 Identification of each categories of tourism business where revenue leakage occurs at MNP

In Manas National Park too census survey was undertaken for all tourism businesses which were operational during the study period. MNP is divided into three forest ranges viz. Bhuyanpara Forest Range, Bansbari Forest Range, and Panbari Forest Range. Except Panbari Forest Range, each forest range has one tourist entry point. It has been found that there were three categories of tourism businesses in MNP viz., tour camps, jeep safari, and elephant safari. The number of tourism businesses in each sector are depicted in the Table 5.13. Out of the eight tourism businesses, six were tour camps, one jeep safari and one elephant safari. Except one tour camp at Bhuyanpara Range, all tourism businesses were located at Bansbari Range.

Table 5.13: Types of tourism business around MNP

SL No	Tourism business	Local	Non-local	Overall
1.	Tour camps	2 (33.33)	4 (66.67)	6 (75)
2.	Jeep	1 (100)	0 (0)	1 (12.5)
3.	Elephant	1 (100)	0 (0)	1 (12.5)
Total		4	4	8

Note: Figures in the parentheses denote percentage

Out of the six tour camps, 4 (66.67%) were owned by non-local actors. These tour camps purchased all grocery items, food items, and house keeping items from rural gateway towns. They employed non-local people in the top positions of the tour camps. Therefore in case of tour camps owned by non-local actors, leakage occurred in terms of profits and salaries repatriated, import of grocery items, import of housekeeping items, and import of food items from rural gateway towns.

In case of the tour camps owned by the local actors, profits accrue to the local people and hence stayed within the local economy. They employed local people. Therefore, the wages and salaries earned by the employees stayed within local economy. The tour camps owned by the local actors also purchased housekeeping and grocery items from the rural gateway towns. Therefore, leakage occurred in terms expenditure on housekeeping and grocery items. All the tour camps had to import such items as the local economy was not equipped with required infrastructure to produce those items locally.

There was only one jeep safari service i.e. Manas Jeep Safari Association, located at Bansbari Range. The owner of the jeep safari was an association formed by local youths. The leakage occurred in way of fuel costs. No other kinds of leakage were found in case of jeep safari.

There was only one elephant safari service i.e. Manas Elephant Safari Association located at Bansbari Range and that was run by a local NGO, *Anajaree*. The service provider hired elephants from different parts of the State. The *mahut* (elephant trainer) and the grass cutters were paid by the elephant owners. The ration for food for the *mahut* and the grass cutters were paid by the service provider. Therefore, leakage occurred due to payment of rent of the elephants to their owner. The expenses paid for

the ration of the *mahut* and the grass cutters stayed in the local economy since that amount was spent locally.

5.5 Quantification of approximate amount of leakage of tourism revenue in MNP:

5.5.1 TR, LR and RR of the local economy of MNP:

It has been mentioned earlier that TR is the summation of the tourism revenue of all tourism businesses operational in the study area during the study period. There were eight tourism businesses under three categories in MNP. Therefore, TR is the summation of tourism revenues of all the eight tourism business units. Likewise the Leaked Revenue is also summation of leakage of tourism revenue of all the eight tourism business units. Thus, the TR, LR and RR of all tourism businesses around MNP are INR 10439690.00 (approx. INR 10.44 million), INR 4964405.00 (approx. INR 4.96 million) and INR 5475285.00 (approx. INR 5.48 million) and the leakage rate was 47.55% as it depicted in Table 5.14.

A summary of the distribution of tourism revenue, retained revenue and leakages of the study area is shown in the Table 5.14. The table also shows tourism revenue, retain revenue and leak revenue per capita tourist and local resident respectively.

The revenue per tourists was estimated to be INR 870.19. Out of that INR 413.80 was leakage and INR 456.39 was retention. The implication is that tourist per capita spending in MNP was far low compared to that of KNP during the study period. This is basically because, the tourists did not have sufficient opportunity to spend. The resident per capita revenue in MNP was INR 231.09. Out of that resident per capita leakage and retention were INR 109.89 and INR 121.20 respectively. Thus, it is obvious that compared to KNP, people were not much benefited from tourism.

It should be noted here that tourism business in MNP are mostly concentrated in Bansbari Range. In case of Bhuyanpara Range, people are not adequately aware about tourism business. Even in case of Panbari Range, people are still unaware regarding tourism business. The TR, LR and RR of different tourism businesses are discussed below:

Table 5.14: Tourism scenario of MNP

Heads	Amount / Rate
Annual Revenues	
Tourism Revenue	INR 10439690.00
Leaked Revenue	INR 4964405.00
Leakage rate (%)	47.55
Retained Revenue	INR 5475285.00
Retention rate (%)	52.45
Tourists	11997*
Population	45174**
Tourist per capita	
Revenue	INR 870.19
Leakage	INR 413.80
Retention	INR 456.39
Resident per capita	
Revenue	INR 231.09
Leakage	INR 109.89
Income	INR 121.20
Revenue sources	
Tour camps	INR 8168440.00
Jeep safari	INR 2062750.00
Elephant safari	INR 208500.00

Note: *Tourism Department, Government of Assam
 ** Department of Forest, Government of Assam
 \$US 1= 45 Indian Rupee (March, 2011)

Among the different categories of tourism businesses, the tour camps earned the maximum revenue (INR 8168440, approx. INR 8.17 million, 78.24%) during the period of the study (Table 5.15). It was followed by Jeep safari (INR 2062750, approx. INR 2.06 million, 19.76%) and Elephant safari (INR 208500, approx. INR 0.21 million, 1.99%).

Table 5.15: TR, LR and RR of Tourism Business, MNP

Tourism business	No	TR (INR)	LR (INR)	RR (INR)	LR rate (%)
Tour camps	6	8168440 (78.24)	4471405	3697035	54.74
Jeep safari	1	2062750 (19.76)	370000	1692750	17.94
Elephant safari	1	208500 (1.99)	123000	85500	58.99
Total	8	10439690	4964405	5475285	47.55

Note: Figures in the parentheses denote percentage

Coming to revenue leakage, it has been found that it was the highest in tour camps (INR 4471405.00, approx. INR 4.47 million) followed by Jeep Safari (INR 370000, approx. INR 0.37 million) and Elephant Safari (INR 123000, approx. INR 0.12 million). Of course, the leakage rate was highest in case of Elephant safari (58.99%) followed by Tour camps (54.74%) and Jeep safari (17.94%). Thus it is evident that the leakage rate of tour camps in MNP is also far higher compared to 0% and 8% found in *Mae Aw* and *Huay Pu Keng* villages of Northern Thailand respectively which was found in the studies undertaken by Lacher and Nepal (*From leakages to linkages 89; Dependency and development 959*).

5.5.2 Leakage of tour camps:

It was found during the study that the 6 tour camps had 52 rooms and 112 beds out of which 10 (19.23%) rooms and 20 (17.86%) beds belonged to the tour camps owned by local actors. The tour camps owned by non-local actors had 42 (80.77%) rooms and 92 beds (82.14%) as is shown in the Table 5.16).

Table 5.16: Tour camp's room-bed capacity, MNP

Ownership	Number	Rooms	Beds
Local	2 (33.33)	10 (19.23)	20 (17.86)
Non-local	4 (66.67)	42 (80.77)	92 (82.14)
Total	6	52	112

Note: Figures in the parentheses denote percentage

The TR, LR and the RR of the tour camps were INR 8168440.00 (approx. INR 8.17 million), INR 4471405.00 (approx. INR 4.47 million) and INR 3697035.00 (approx. INR 3.69 million) respectively. Out of the total tourism revenue generated by the tour camp, 43.15% were generated by the tour camps owned by the local actors and 56.86% were generated by the camps owned by non-local actors. The TR, LR and RR of the tour camps owned by the local actors were INR 3524990.00 (approx. INR 3.52 million), INR 322005.00 (approx. INR 0.32 million) and INR 3202985.00 (approx. INR 3.20 million) respectively. The leakage rate was 9.13 %. Likewise the TR, LR and the RR of the tour

camps owned by the non-local actors were INR 4643450.00 (approx. INR 4.64 million), INR 4149400.00 (approx. INR 4.15 million) and INR 494050.00 (approx. 0.49 million) respectively and the leakage rate was 89.36% as it is depicted in Table 5.17.

There were 45 employees engaged in the tour camps out of which 9 were engaged in the tour camps owned by local actors and 36 were engaged in the tours camps owned by non-local actors. There were no non-local people employed in the tour camps owned by the local actors. The average salary of the employees engaged by the local actors was INR 2592.59 per month. In the tour camps owned by the non-local actors, the average salary of the local employees were INR 2160.56 per month and the average salary of the non-local employees were INR 10388.89 per month (Table 5.18).

This indicates that the tour camps owned by non-local actors paid more salaries to the non-local workers. Since the tour camps owned by the local actors employed all local people in each position, the tour camps owned by the non-local actors can also appoint local people in different positions.

Table 5.17: TR, LR and RR of the tour camps, MNP

Name of the tour camps	Ownership	TR (INR)	LR (INR)	RR (INR)
Thogbang Jungle camp (MMES)	Local	1406000	131645 (9.36)	1274355 (90.64)
Florican cottage (MMES)	Local	2118990	190360 (8.98)	1928630 (91.02)
Total	Local	3524990 (43.15)	322005 (9.13)	3202985 (90.87)
Manas view jungle resort	Non-local	726600	604050 (83.13)	122550 (16.87)
Bansbari lodge	Non-local	2330200	2136700 (91.69)	193500 (8.30)
Birina lodge	Non-local	770650	634050 (82.27)	136600 (17.73)
Bansbari Bunglow	Non-local	816000	774600 (94.93)	41400 (5.07)
Total	Non-local	4643450 (56.86)	4149400 (89.36)	494050 (10.64)
Over all Total		8168440	4471405 (54.74)	3697035 (45.26)

Note: Figure in the parentheses denote percentage

Table 5.18: Retained salaries and leaked salaries (in INR) in tour camps, MNP

Ownership	No	Local employee	Non-local employee	Retain salary	Average retained salary	Leaked salary	Average leaked salary
Local	2	9	0	140000	2592.59	0	0
Non-local	4	30	6	388900	2160.56	374000	10388.89
Total	6	39	6	528900	2260.26	374000	10388.89

5.5.3 Leakage from Jeep safari:

The jeep safari association is an organisation of 10 local jeep owners. The TR, LR and RR of the jeep safari association were INR 2062750.00 (approx. INR 2.06 million), INR 370000.00 (approx. INR 0.37 million), and INR 1692750.00 (approx. INR 1.69 million) and the leakage rate was 17.94 %. The leakage occurred due to the payment of entry fees to the Forest Department, Government of Assam, and fuel cost. Therefore the leakage in jeep safari cannot be avoided.

5.5.4 Leakage from Elephant safari:

The elephant safari was also owned by an NGO formed by local youths. The NGO hired elephants from different parts of the State and provided the service to the tourists. The TR, LR and RR of the Elephant Safari were INR 208500.00 (approx. INR 0.21 million), INR 123000.00 (approx. INR 0.12 million), and INR 85500.00 (approx. INR 0.09 million) and the leakage rate was 58.99 %. The leakage occurred due to the payment of rent of the elephant owners.

5.6 Identification the Causes of revenue leakage in MNP:

Tour camps run by local NGOs engaged local people in all positions, the remaining engaged non-local people in top positions and local people in lower positions. Tour camps run by local NGOs used maximum amount of locally available food items. Of course, a few products which are not grown/produced locally such as cereals, tea, sugar, salt, wheat, cold drinks, bottled water, packaged fruit juice, biscuits, and spice

were purchased from the Rural Gateway Towns. The tour camps owned by non-local actors purchased food and housekeeping items from the rural gateway. Thus leakage was found in the form of profits of tour camps run by non-local actors, salaries of non-local workers, cost of food and housekeeping items purchased from rural gateway towns, tariff of electricity, cell phone and telephone tariff, expenditure on fuel and cooking gas and tariff of DTH-TV.

Each tour camp had its own Jeeps for Safari. Except the cost of fuel, there was no leakage in Jeep Safari in the tour camps run by NGOs. But no income from Jeep safari stayed in the host economy in case of tour camps owned by non-local actors. This is because the income of the jeep safari went directly to the non-local owners of tour camps since they have own jeep safari service.

In case of Manas Jeep Safari Association, the costs of fuel did not stay in the study area. Thus leakage was found in the form of fuel used in Jeep Safari, and rent of elephant hired from the outside the tourism destination etc. No leakage was found in the tribal or traditional dance exhibited to tourists by the tour camps. The tour camps arrange the cultural show of tribal dance on demands and the whole income was transferred to the performers. Therefore, the income from cultural programme benefited local people directly.

The causes of these leakages were lack of capital and local ownership, lack of local employee, and lack of linkages of local resources to tourism. This is consistent with other studies on local level economy by Lacher and Nepal (*From leakages to linkages* 80), Sandbrook (*Local economic impact* 21; *Putting leakages in its place* 124) and Walpole and Goodwin (559). Of course, the unique aspect of this tourism site is that the local people lack awareness regarding employment opportunity in tourism. There is minimal contact between tourists and the rural inhabitants around MNP. There are few local outlets that serve food and other kinds of commodities to tourists. For every small thing, the area has to depend on rural gateway towns. The main causes of leakage of tourism revenue in MNP are discussed below:

5.6.1 Lack of capital and local ownership:

In MNP, majority of the tour camps were owned by non-local actors. In recent years, the local people have started forming NGOs and initiated the tourism business for capturing tourism revenue in the destination. Mainly two causes have been identified as responsible for lack of local ownership. First, the local people do not have sufficient capital to invest in the tourism business. Second, they do not have entrepreneurial quality, efficiency and experience to do so.

5.6.2 Lack of local employment

In MNP, the tour camps owned by the non-local actors employ non-local people for the posts of managers, assistant managers, etc. The tour camps owned by local actors employ local people. Tour camps which are owned by the non-local actors are big farms with outside connection and have the capacity to accommodate much more tourists compared to the tour camps run by local actors. Such large camps need educated, experienced and skilled workers which is lacking in the destination.

5.6.3 Lack of ability to link local resources to tourism

The tour camps owned by local actors purchased all food items from the local markets. Nevertheless, some items, such as, cereals, bread, butter, *chow*, fruits, coffee, tea, biscuits, wheat, bottled water, packaged fruit juice, etc. were imported from the Rural Gateway Towns. The house-keeping items were also purchased from the Rural Gateway Towns. The tour camps owned by non-local actors purchased all commodities including food and house-keeping items from the same Gateway Towns. The destination is unable to supply the tourism industry with goods and services they need. Even in areas where linkages would appear simple, such as agriculture, handicraft items, handloom items, etc., they often do not occur, and local economy suffers from high leakages.

5.7 Stake holders' suggestions on development of local level strategies to minimise revenue leakage at KNP and MNP:

As a part of the study, the stakeholders of the tourism sector have been interviewed (as it was discussed in the methodology chapter in detail) to identify

probable areas where the local people of the destinations can get involved in tourism related activities and gain economic benefits. During the interview, various opportunities for local people were proposed by the stakeholders. Most of the stakeholders suggested local people to start home stay accommodation, souvenir shops, work as tour guide, acquire skills to get employed in the existing business houses, and starting bullock cart service. The complete list of suggestions provided by the stakeholders is presented in the Table 5.19. It is to be mentioned here that some of suggestions that are too broad and not specific to the destination have been removed from the list.

Table 5.19: Opportunities suggested by stakeholders

Sl No	Proposed opportunities for KNP
1.	Starting home stay and establishing small lodge
2.	Selling of local foods and beverages
3.	Performance of local cultural programmes for tourists
4.	Production and selling of handicraft and handloom items as souvenir
5.	Starting bullock cart service for traditional village visit
6.	Starting bicycle service for traditional village visit
7.	Production and selling of local fruits and vegetable items
8.	Employment of local youths in existing tourism related business houses
9.	Involvement in animal husbandry, poultry farming, fishery
	Proposed opportunities for MNP
1.	Development of rural tourism
2.	Enhanced involvement of NGOs
3.	Starting bicycle service for traditional village visit
4.	Selling of local fruits and vegetables
5.	Production and selling of souvenir items
6.	Private-Community Partnership Project
7.	Boating service
8.	Visit to tribal and non-tribal Assamese village
9.	Starting of Home stay accommodation
10.	Starting guiding service

An attempt has been made to match these proposals to the findings of the empirical study and available literature study. The following is the discussion on proposed strategies that have been developed on the basis of findings of the study, stakeholders opinion and literature review.

5.8 Strategy formulation for minimizing leakage in KNP:

The study reveals that main causes of leakages are the lack of local ownership and non-availability of capital, lack of employment for local people, lower salaries to local employees, lack of ability to link local resources to tourism, and poor marketing linkage of local actors. This was discussed in detail in the Section 5.3 and 5.6 of this chapter. To increase the retained part of the tourism revenue, the above issues are to be addressed. Therefore, on the basis of the availability of resources, some strategies were developed taking proposals by stakeholders, findings of the study, and literature review as guidelines. Formulated strategies were then circulated among a panel of experts in three rounds. This has been done to check the practicability of the proposed strategies in the actual field.

5.8.1 Home-stay facility:

Different entry points of KNP especially Kohora, have witnessed growth of tourism business in recent years. The mushroom growth of resorts and big hotels has created a number of problems for KNP (UNESCO-IUCN 22). Discussions with high ranking forest officials posted at KNP have brought to light various problems that have come up due to unplanned growth of hotels and resorts.

First, it has destroyed the animal corridors and thereby restricted the natural movement of the animals leading to increase in the man-animal conflict. Secondly, it has increased the problem of water management and solid waste disposal system. Third, the rampant construction of concrete buildings has destroyed the scenic beauty of the National Park. The private corporate sector has converted the natural landscape to an artificial concrete township. The deep well boring for heavy use of water has generated the fear of decreasing the ground water level. To check more degradation of the scenic beauty of KNP, new construction of big hotels and resorts should be monitored and, if necessary, stopped. This is possible with Government initiation with support from local people and organizations.

The big hotels and resorts have been established either on an agricultural land purchased from local people, or a government land leased out by the Government. The selling of land by the local people has to be checked if the National Park has to sustain.

For this, awareness campaign among the local people should be organized by the local organizations and NGOs. There are number of local Organizations and NGOs viz. *Kaziranga Suraksha Samity*, Kaziranga Development and Jeep Safari Association, *Krishak Mukti Sangram Samity* working for the conservation of the National Park. Awareness has to be generated among the local public that their sustainability is linked to the sustainability of the National Park. Selling of land to the corporate sector definitely brings in a good one-time return. But heavy construction will affect the sustainability of the National Park and ultimately, in the long run, will have negative impact on the lives (income and lifestyle) of the local people. The organizations should also dialogue with the Government to refrain from converting agricultural land to commercial land. Though Government has encouraged the private corporate sector to establish hotels and resorts for the development of tourism sector of KNP, it does not help the local community in any way. Neither the restrictions on the entry of the corporate sector can hamper the tourism in KNP. Rather it will open a door for the local community to participate in the accommodation sector.

Home stay facility may be a good option for the local population around KNP to get involved in tourism related activities. Home stay facility has been used as a successful strategy in different places within the country and abroad. Literatures have shown how village people have been benefited by providing home stay facility in Malaysia, China, Thailand, and some parts of India (Sikkim, Himachal Pradesh, and Jammu and Kashmir) (Liu 885; Ibrahim 9; Hjulmand *et al.* 6; Gu and Wong 258; Boonratana 208; Chettri, Shakya, and Sharma 128; Jain 1; Anand, Chandan, and Singh 126). Literature of Goswami (*Eco-tourism in Kaziranga* 54) mentioned that tourists come to National Parks or Protected Areas for enjoying virgin forest and exotic wildlife rather than luxury. Promotion of home stay facility does not destroy the natural and scenic beauty of the National Park; fairly it will increase the potentiality to enhance local's participation in tourism industry.

Home stay facility not only increases the local community's participation in tourism but also helps in maintaining the ecological sustainability. In Kohora Range, where tourism business is comparatively matured, local people should concentrate on Home-stay. Though some households have started home stay accommodation and

succeeded in generating and retaining some amount of tourism revenue, these home stay units are being managed without any planning and monitoring. There is no uniformity regarding the tariff of lodging and meal, quality of infrastructure etc. Though some home stay units have catering too, many do not. Priority should be given on improving the quality of infrastructure, maintenance of the ambience, maintenance of waste management system, and hygiene (Mitchell and Faal 56). These home stays are running without any guideline and regulation regarding minimum quality of lodging and food, sanitation and hygiene, security and safety of the tourists, garbage disposal facilities, water treatment system, architectural design of the rooms, surrounding environment, minimum space for the rooms used for accommodation etc.

The home stay business in the study area needs a proper plan. As a part of the plan, a complete mapping of the households, locations to be used for accommodation, animal corridors, water flows, drainage system, and solid waste disposal system is required.

For the promotion of the home stay facility, the Tourism Department of the State Government has to extent cooperation and extension activities. There should be coordination among the Tourism Department, households pursuing home stay facility, and other stakeholders. The interrelationship of different organizations involved in planning, monitoring, and providing home stay facility is described in Figure 5.9

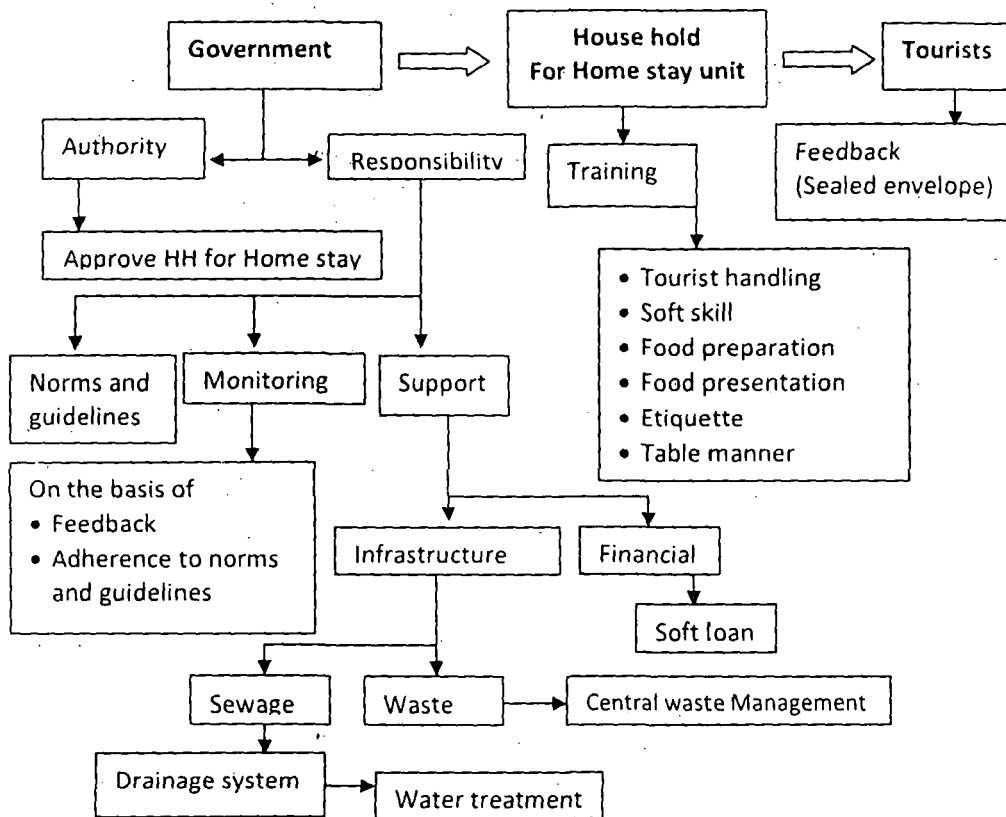


Figure 5.9: Tasks involved in Home stay Management, KNP

For the sustainability of the home stay units by imparting satisfactory services to the tourists, a list of requirements has been proposed. These requirements are for developing soft skill among the provider of home stay facilities and in the area of infrastructure. These requirements are discussed below:

1. The Tourism Department, Government of Assam has to form a Certifying and Monitoring Body comprising of stake holders and Government Agencies which will provide certificate to the households seeking to start home stay accommodation. This study proposes that there should be two distinct Cells for this purpose. One Cell should take the responsibility to generate the norms and guidelines for running a home stay facility and have the authority to certify a household to participate in this particular activity. The other Cell should have the responsibility of monitoring the certified home stay units with respect to adherence of the units to the norms and guidelines provided by the

First Cell. The Second Cell should visit the home stay units at random frequency and report to the First Cell the findings of the visits. It is proposed that feedback from tourists availing the service of the home stay units should be made mandatory. On the basis of the report of the Second Cell and feedback of the tourists, the First Cell should have the authority to take corrective measures for the sake of sustainability of this venture.

2. The households so certified by the authority to operate home stay facility may require financial and non-financial assistance. For financial assistance linkages can be developed with different banking and non-banking financial institutions, and different existing Government Schemes with the households to make it possible for them to access soft loans to start home stay units and maintain basic standards and norms provided by the Authority.
3. It will be the responsibility of the Tourism Authority to create and maintain common infrastructure required for sustainable tourism in the destination. Infrastructure like drainage system and water treatment facility, and central waste disposal system are to be developed by the Tourism Authority.
4. For proper promotion of the home stay facility and making it convenient for the tourists to avail this facility, it is proposed that the authority should open a website and provide online booking system where tourists can choose any home stay units listed in the webpage.

For proper monitoring and management, the Certifying and Monitoring Authority can adapt Himachal Pradesh Home Stay Scheme 2008 and Sikkim Registration of Home Stay Establishment Rules, 2012 as models. In Himachal Pradesh, a committee was formed consisting of District Tourism Development Officer, area manager of Himachal Pradesh Tourism Development Corporation, member from tour agents and tour operators for monitoring home stay accommodations.

In Sikkim, an independent panel named Monitoring and Certifying Authority was formed comprising stakeholders and agencies for monitoring and evaluating the service of home stay units. Under the supervising and monitoring of the Monitoring and Certifying Authority, the home stay units have been providing quality service to the tourists and have earned millions of rupees (Sikkim Government Gazette).

5.8.2 Positioning of traditional food and beverages:

Local food and drink can help local community to capture more tourism revenue within them (Sims 322; Giampiccoli and Kalis 102). In a study undertaken in Lake District and Exmoor of England, it was found that more than 50% tourists had purchased local food and drinks as souvenir (Sims 328).

It was found during the study that the tour camps, especially owned by the non-local people, import food items from rural gateway towns. The menu of these tour camps consists mainly of continental food. Literature suggests that traditional local food is the most preferred food items by the tourists (Borkotoky and Goswami 5; Borkotoky 106). The local women of the villages surrounding KNP have expertise in cooking traditional food (Borkotoky and Goswami 4 ; Borkotoky 92). Around KNP different tribes and ethnic people viz. *Karbi*, *Mishing*, *Assamese* (non-tribal) live with their own culture and tradition. The traditional food items and beverages viz. *Apong* (rice beer) and *Namshing* (dried fish) of the Mishing community, and *Horoland* (rice beer) and *Pakak* (dried pork) of Karbi community are gaining popularity among the tourists at KNP (Goswami, *Feasibility study* 15). Since the tourists have strong preference for the traditional food items, there is opportunity for the local people to get employment in the tour camps if traditional food is included in their menu

Besides, different tribal people use herbal food in their day to day meal. Of late, the demand for herbal food items has been increasing among the tourists (Saikia, Sunil 7). This opportunity can be taken by the local people living around KNP.

Opportunities for the local people in the field of traditional food and beverages:

1. *Employment generation in the food preparation sector:* The different accommodation providers in the study area provide catering to the tourists. As

a result, there is employment avenues in the form of cook and assistant to the main cook.

2. *Starting independent endeavor*: As it has been established that both domestic and foreign tourists have demand for traditional food products, there is opportunity for the local population to start their independent business venture in the restaurant sector, positioning the restaurants as provider of ethnic traditional food of different tribes served in traditional manner in a traditional environment. One such venture has already started functioning near the Kohora Range of the National Park by a group of youth belonging to the *Karbi* community. Here traditional *Karbi* food and beverages, cooked in traditional method are served. The setup is designed in such a way that a visitor gets the feeling of a traditional environment.

Required infrastructural facilities for positioning traditional food and beverages:

Food *mela* (Food festival) can be organized during tourism season. This can be done near Kohora Range since it receives the highest number of tourists. This project can be undertaken on Public Private Partnership (PPP) basis. Assam Tourism Development Corporation (ATDC) can construct building and lease it out to private parties for organizing *Food Mela* (Food festival) during tourism seasons. Organizations like North Eastern Development Financial Corporation (NEDFI), District Rural Development Organizations (DRDO), and local Self Help Groups (SHGs) can help in initiating such a project.

5.8.3 Positioning of unique culture and tradition:

The unique culture and tradition of different tribal and ethnic groups living in the villages around the National Park have the possibility of developing linkage with the tourism sector. Some important traditional festivals that can be highlighted are *Ali-aye-ligang* of the *Mishing* community, *Rong-kher* of the *Karbhis*, *Dausi* of *Napali* community and *Karam* of the *Aāibashi* (tea tribe) community. Folk songs and dances like *Bihu* of Assam, *Oinitom* of the *Mishing* community, *Bagrumba* of the *Bodo* community, *Jhumur*

and *Rong* of the *Adibashi* community can form strong tourism products for the destination to generate and retain tourism revenue. The demonstration of their traditional music and dance, traditional tools used in daily activity, traditional weaving process and patterns, traditional clothing, and traditional cultivation system may be the centre of attraction for the tourists if these are properly positioned and marketed. According to Wilson et al. (134), Borkotoky (118), and Borkotoky and Goswami (8), development of rural tourism is less costly to develop and easier to establish as compared to other economic development strategies. Available literatures (Borkotoky 118; Borkotoky and Goswami 7; Goswami, *Feasibility study*) showed that at KNP, tourists show interest in visiting Assamese tribal and non-tribal villages. Besides, tourists demand for traditional food items of different communities (Borkotoky 106; Borkotoky and Goswami 7). This can be taken as an opportunity that can be exploited to generate tourism revenue and retain it in the destination economy.

Examples are found where by displaying unique culture and tradition, some rural tourism destinations were able to generate significant amount of tourism revenue. *Huay Pu Keng* village of Northern Thailand generated US \$ 51806 in 2006 showing their unique culture to the tourists (Lacher and Nepal, *From leakages to linkages* 92). Three folk villages viz. Boating Areca Manor, Sanya Li Folk Village, and Indonesian Village of Hainan, China are very famous among the tourists for its' unique cultures (Xie and Wall 356).

Required infrastructural facilities for providing service to the tourists:

1. Promotion of different tribal and non-tribal ethnic villages for the tourists through websites, leaflets, brochures etc.
2. Establishment of cultural museum where all traditional products of different ethnic groups will be preserved for demonstration to the tourists.
3. Establishment of central auditorium at the tourists entry point so that cultural programme can be performed during the tourism season. Such type of Community Auditorium was already established at Kuthori near the Bagori tourist entry point. Initially cultural programme should be started charging reasonable entry fees during the tourism season at Bagori as an experiment

basis. If it succeeds, such type of programmes can be started in other tourists entry points too.

5.8.4 Positioning of local souvenir items:

It was found that out of the 16 souvenir shops, only one souvenir shop, 'Kaziranga Hut' produces its saleable items itself. The remaining souvenir shops import the saleable items from outside the study area. Literature (Borkotoky 104; Borkotoky and Goswami, 7) revealed that tourists gave high preferences in buying souvenir in KNP. The women from the villages surrounding KNP are skilled in weaving, embroidery, crocheting, cutting and tailoring, and jute work (Borkotoky 104; Borkotoky and Goswami 4). Besides, the men are also expert in weaving, bamboo work and wood work (Goswami, *Feasibility study* 53). Models of traditional fishing products like *polo*, *jakoi*, *khaloi*, *sepa*, *thuha*, traditional weaving items like *tat shal*, *mako*, *rash*, traditional music instruments like *dhol*, *pepa*, *khol*, *toka*, *gogona*, *sutali*, *chifun*, and traditional clothes like *gamocha*, *chadar*, *cheleng*, *dokhona*, *arnai* etc. can be produced to be used as souvenir to foreign as well as domestic tourists. Even some of traditional dried food items can be used as souvenir products for the tourists (Sims 328). The souvenir shop has to charge reasonable price from the tourists and should use a proper label that proves that the product is made locally maintaining recognized quality (Ashley, Goodwin, McNab, Scott and Chaves).

In many tourism destinations including protected areas, souvenir sale has been adopted as one of the important strategies for generating and capturing tourism revenue. Local communities living near the Wadden Sea National Park (German) sell souvenir items and generate considerable amount of tourism revenue (Kalisch and Klaphake 112). Mae Aw village of Northern Thailand is famous for its local souvenir products and generated US \$ 51194 in 2006 (Lacher and Nepal, *From leakages to linkages* 93). Lake District and Exmoor, the two popular rural tourism destinations of England, are famous for diversified souvenir items (Sims 328). Malta is famous for handicraft souvenir (Markwich 32). In Kruger National Park of South Africa, souvenir item is one of the leading tourism businesses, which generates considerable amount of tourism revenue (Saayman, M., and Saayman, A. 75).

Opportunities for the local people through local souvenir items:

1. *Work as a craftsman:* The local artists can get engaged as craftsman of the souvenir products. The people living in the fringe villages of KNP are skilled in different handicrafts and handlooms activities. They can produce different decorative traditional items and can sell to the retailers of the souvenir.
2. *Work as an entrepreneur:* The local people can start business establishment to sell local handloom and handicraft items. By selling locally produced items, they will be able to capture considerable tourism revenue within the local economy.

Required infrastructural facilities for production and selling of souvenir items:

1. *Establishment of souvenir shops dealing in locally produced handlooms and handicraft items.* A small selling point was established by NEDFi at Basagaon, a village under Kohora Range, and it was handed over to a SHG, *Aparajita*, to sell their souvenir products produced themselves. This type of selling points can be established in other villages also.
2. *Establishment of souvenir shop in each tour camps.* Already, the tour camp, Woodland, has allowed its local employee to open a souvenir shop in its premises for demonstration and sale. This activity can be started in other tour camps also. The local pressure groups and SHGs can appeal to the tour camps to provide a place in their premises for establishing small souvenir shops.
3. *Formation of SHGs.* The local people have the skill to produce different souvenir products but they lack organizational capacity because of which they are incapable to link it to the tourism industry. Formation of SHGs may be a solution to this problem.

5.8.5 Positioning of local fruits and vegetables:

Assam's local fruits and vegetables such as Wood apple, Plum, Myrobalan, Olive, Apricot, Garcinia, Flacourtia, Carambola, Baccurea Sapida, Anola (Indian Gooseberry), Areca Nut, Chalita (*Dillenia indica* linn vera), Assam lemon, Fern (Dhekia) etc. are found in abundance in almost every household (Borkotoki 119; Borkotoki and Goswami 8). Tourists demand for these local fruits and vegetables (Borkotoki 119; Borkotoki and Goswami 8). Taking this advantage, the local people can concentrate on cultivation and sale of such products. Literature also showed how purchasing from local farmer benefited the resorts and the farmers both. In Jamaica, the Sandals Resorts Farmers Programme, initiated and supported by the Sandal Group in 1996 started with 10 farmers supplying local fruits and vegetables to two hotels. By 2004, there were 80 farmers supplying to hotels across the Island. As a result of the programme, farmers' sales increased over 55 times in three years. Benefits to hotels include a wider variety of good quality local produce and cost savings (Ashley, Goodwin, McNab, Scott and Chaves 3).

Required infrastructural facilities for production and selling of fruits and vegetables:

1. Establishment of cold storage facilities by Government in the KNP area so that fruits and vegetables can be preserved for long time.
2. Use of labels indicating that the product has been produced in Kaziranga: brands that guarantee authenticity, local sourcing and recognized quality.

5.8.6 Starting Bullock cart safari:

There is a potentiality of the local people to capture tourism revenue by providing the service of Bullock Cart safari for the tourists at KNP. The distance between the Jeep Safari point and the Elephant Safari point of Kahora Range is approximately 1 km from the national highway. Taking this distance as an opportunity, local farmers who have Bullock Cart can start bullock cart safari to take the tourists from resorts to the Jeep/ Elephant safari point. Literature (Heinen and Shrivastava, *An analysis of conservation*

attitude 264-265) indicates that agriculture is the single largest occupation of the villagers around KNP and the farmers have abundant number of bulls. Therefore it is not difficult for the farmers of the villages around KNP to start Bullock Cart Safari. This activity will not only increase the potentiality to generate and retain tourism revenue within the local community but also provide unique experience and fun to the tourists. Bullock cart safari can also be started for visiting tribal villages and tea gardens spread over the adjoining areas of the National Park.

7.8.7 Other strategies:

5.8.7.1 Staffing from local source:

It was found in the study that the tour camps, especially those owned by the non-local people, employed non-local people. Even some tour camps owned by the local actors also have appointed non-local people. The salary and the wages of the non-local people are repatriated and therefore the local economy has to experience heavy amount of leakage. To retain tourism revenue in the destination, it is important to employ local people in each tourism business. Employing local staff and adhering to wage and employment regulation leads to increase local people's benefits from the tourism sector. In Tunisia, the government offers tax incentives for new investors employing Tunisian Employees (Ministry of Development and International Cooperation, Government of Tunisia 23). Even there is a minimum wage for the local employees in Tunisian Tourism Industry (Ministry of Development and International Cooperation, Government of Tunisia 18). Literature suggests that in some Caribbean Island, about 35-50% of the working staffs are engaged from the local sources (Mitchell and Fall 44).

Required infrastructural facilities:

Local developmental bodies should take help from different academic and non academic institutions viz. Indian Institute of Entrepreneurship (IIE) of the state to train up the local youth in the identified areas. Trained staff can increase their incomes and attract a higher starting salary (Ashley, Goodwin, McNab, Scot, and Chaves; Mitchel and Fall 45).

Literature reveals that the Sandals Resorts, a Jamaican-owned chain operating across the Caribbean, have a programme to train young people from the local community, on every aspect of running resorts. Upon completion, participants are awarded certificates and references for employment in nearby hotels or employed by the Sandals Resort. It assists in developing the human and social capital locally and builds good links between the community and the private sector (Mitchell and Faal 45). Though Sandal Resort is a high-end tourism business, the activities undertaken by it for the local people's benefits can be the model for the local high-end tourism businesses operational in KNP. There are some high-end tourism businesses in KNP too viz. IORA, Wildgrass, Landmark Wood, Grass Land which can start this kind of activities so that local youth get benefit.

IORA, a private tour camp in KNP, has organized a skill development workshop in 2004 for the local weavers inviting experts from IIE under the sponsorship of *Panchayati Raj*. After the workshop, IORA has been encouraging the weavers to produce handloom items and purchased products to sell in the retail outlet, *IORA HAAT* located in the hotel premises. This initiation has given a platform to local weavers to be economically empowered and to capture a considerable amount of tourism revenue with them. This kind of activity should be extended in other areas of employment and should be initiated in other tour camps too.

5.8.7.2 Public Private Partnership Activity:

In KNP, Public Private Partnership (PPP) activity can be started in case of souvenir, restaurants, and tour camps. Already this kind of activity has been started in KNP. A project, Rural Business Hub on Handloom was implemented through a PPP model among Ministry of Panchayati Raj, IIE, and private sector IORA-Janambhumi Private Limited. Under this project, weavers were trained up by IIE with the financial assistance of Ministry of Panchayati Raj. The project was organized by the Private organization, IORA. Weavers were trained up in two training centers, one is in

Bochagaon village and the other is in Kuruabahi village adjoined to KNP for making different traditional items viz. *mekhela chadar*, *gamosa*, *shawls* and modern items viz. table runner, table mats, cushion covers, tea bags, cane baskets, trays etc. IORA purchases the products produced by weavers for the sale in its retail outlet, IORA-Hut. By this project, nearly 120 weavers got benefitted (Anand 6).

Besides, a restaurant, *7-Sisters* was constructed by Assam Tourism Development Corporation (ATDC), a State Government Undertaking, and has been leased it out to private party. Likewise, two tour camps, *Prasanti Tourist Lodge* and *Jupuri Ghar*, have been constructed by the ATDC and leased it out to the private parties. But these parties are non-local actors. It would be better if the lease would have been given to the local people. This kind of PPP model should be started taking local people as its beneficiaries.

5.9 Strategy formulation for minimizing leakage in MNP

It has been argued that involvement of local people in tourism related activities leads to increase in their income, which ultimately enhances their standard of living. This helps in raising their awareness regarding conservation and sustainability of the destination. For identification of possible areas for local people in tourism related activities in MNP, selected stakeholders were approached for discussion. Keeping in mind about the skill of the people, cultural resources of the area, and other related factors, some strategies have been conceptualized and they have been put through expert opinion survey. The following is a discussion on the proposed strategies:

5.9.1 Development of Rural Tourism:

The development of rural tourism not only provides an additional income and new employment opportunities to local communities but also provides an opportunity to revive local crafts and arts such as paper cutting, wood and stone carving, cane and bamboo weaving, lace-making, folk song and dance, local cuisine recipe, wine making, and traditional therapy of medicinal herbs (Su 1140).

Rural tourism can be positioned as an important tourism product so that local community can generate considerable amount of revenue. Through rural tourism,

different countries have succeeded in generating tourism revenue. *Huay Pu Keng village* of Northern Thailand is a very popular rural tourism destination (Lacher and Nepal, *From leakages to linkages* 92; *Dependency and Development* 957). In Hainan, China, *Hotting Areca Manor*, *Sanya Li Folk Village*, and *Indonesian Village* were developed as rural tourism destinations (Xie and Wall 356). *Mawlynnong Village* of Meghalaya, North-East India, is very successful as a model village which got the status of cleanest village in Asia in 2003 (Nayak and Mishra 5). Likewise, *Baling* has been developed as one of the popular rural tourism destinations of Malaysia (Liu 883).

The important thing is that the people of these model villages earn substantial income by displaying their traditional dance and music and selling handicraft and handlooms products as souvenir (Ling-en, Sheng-kui, Lin-sheng, Song-lin and Bijaya GC121).

The economic condition of the people living in the fringe villages of MNP is not sound and it was explained in details in the section 3.5 of Chapter III. They are not aware that tourism can be an alternative source of income for them. The people do not have the experience and skill that are required to get involved into tourism. The resource they have is their unique culture and traditional livelihood system which can be promoted as an important tourism product. A destination with unique culture has the potentiality to generate substantial tourism revenue (Lacher and Nepal, *Leakages to linkages* 94-95). The adjoining villages of MNP are dominated by the Bodo tribe. Besides, *Chowtal* (tea tribe) and other ethnic groups like Assamese (non-tribal), Nepali etc. also live in these fringe villages. Each ethnic group has its own culture and tradition. At the initial stage, focusing their ethnic culture and tradition as a tourism product, tourists can be attracted to these ethnic villages and can be charged entry fees from the tourists. There are lots of traditional and ethnic items to exhibit to the tourists. The *Bodo* people are very rich in their culture and tradition. Their traditional food and beverage, folk music and dance, traditional clothes, and traditional cultivation system may be presented to the tourists. The advantage of developing rural tourism is that it does not require big investment and the local community can start this without external assistance. As popularity of such villages grows among the tourists, they can be developed as Model Ethnic Villages. By preserving the fragrance of ethnicity and tradition and maintaining cleanliness and natural

environment, Model Ethnic Villages can be formed by the villagers themselves through their own effort.

Suggested areas of rural tourism:

1. Exhibit *Bodo* and other ethnic and tribal villages to the tourists.
2. Establishing museum of traditional equipments of tribal culture, viz. traditional pounding equipments made of wood, traditional cultivating tools, traditional weaving equipment, traditional fishing equipments, food preparation equipments specially making of rice-bear equipment etc.
3. Exhibit traditional way of cultivation and provision of participatory programme for the tourists willing to enjoy traditional village life.
4. Exhibit traditional weaving and crafting
5. Exhibit traditional way of making rice bear viz. *Rachi* and *Jou*, the two kinds of popular rice bear of the *Bodo* tribe.

5.9.2 Accommodation run by NGOs:

Since the economic condition of the local people is not sound and they lack skill and experience in entrepreneurial activities, it may not be possible for them to start accommodation facilities by themselves initially. In such a situation, formation of NGOs may be a good option for the local youths. By forming NGOs, they can cope with the challenges through group activity and can generate required fund. By constructing cottages and rooms at reasonable cost, NGOs can start accommodation service for the tourists.

The NGO, Manas Maozgendri Ecotourism Society (MMES), was formed on 13th December, 2003 to look after Conservation and Ecotourism issues in and around MNP. After constructing low cost thatch roofed cottages using local resources and technology,

MMES started receiving tourists from 2005 in their tour camp, *Thobgang Jungle Tourist Camp*. Since then, flow of domestic as well as foreign tourists has been increasing. The NGO provided alternative source of income to the people who were dependent on forest earlier. People are assisted in piggery farming, fishery, poultry farming and cultivation. During the tourism season, it purchases meat, fish, cereals, rice, vegetable, milk, eggs and other agricultural items from the local people. Before the establishment of the NGO, the site was not even identified as tourist entry point. The NGO has converted the ordinary site to a popular tourist entry point, succeeded to attract more than 1200 Indian and 200 foreign tourists and has retained significant amount of tourism revenue within the local community. In the study year, the NGO collected INR 1406000.00 (approx. INR 1.41 million) from tourists out of which INR 1274355.00 (approx. INR 1.27 million) i.e. 90.64% of tourism revenue was retention.

Manas Ever Welfare Society (MEWS) was established on 3rd January, 2006. It started tourism activity in December 2009 by constructing five cottages made from locally available resources, named it as *Florican Cottage* and started providing accommodation facility to tourists. All the members and employees of the NGO are local. The NGO purchases all its necessary food grains, chicken, fish, eggs, vegetables, milk, fire wood etc. from the nearby villages. The NGO has provided Rs15, 000 each to 10 people with assistance from 'Bodoland Territorial Area District fund for dairy farming. With the financial assistance of World Wide Fund for Nature (WWF), the NGO has helped the local people in piggery farming, fishery, poultry farming and cultivation so that the local people can link their production to the tourism industry. The tour camp generated INR 2118990.00 (approx. INR 2.12 million) out of which INR 1928630.00 (approx. INR 1.93 million) i.e. 91.02% was retention in the study period.

In case of both the NGOs discussed here, it has been seen that they have been adopting local level strategies for retaining tourism revenue within the destination. The members of the NGO are local and they distribute the profit among themselves. Since there is no employee from outside the area, there is no remittance. Even the NGOs provide locally available food to the tourists. Only a negligible amount of revenue leaks out of the area for the purchase of house keeping items required for the maintenance of rooms. Accordingly, a small amount of revenue leaks due to purchase of raw food items

such as packaged fruit juice, packaged butter, biscuits, chow, spices etc. from outside the study area. The benefit of the tourism to local economy depends upon how linkages are made between the potentialities of the local situation with the tourism sector. Since MNP is one of the largest national parks in India, some new NGOs can be formed with local community in Panbari Range, can convert a place into a tourist entry point and provide accommodation. Since accommodation is the largest leakage prone area at MNP, new accommodation facilities can be started by the NGOs by constructing cottages following the model of MMES and MEWS and minimise leakage.

5.9.3 Bicycling service:

It must be noted here that the wildlife lover do not come to enjoy luxury but to experience natural environment (Goswami, *Eco-tourism in Kaziranga* 54). Keeping this in mind, the local people can concentrate on those businesses where requirement of capital is low. Since they do not have sufficient money to start tourism business, they can start bicycling service as a tourism byproduct by which the tourists will be able to enjoy local tea gardens or tribal villages and the local people will be able to generate revenue. There are a good number of tribal villages with their unique ethnicity scattered around MNP. These villages can be visited easily through bicycle. The great advantage of bicycling service is that it is the most economic and environment friendly transportation system. Bicycling is a popular recreational activity in many national parks (Wilson 2) viz. Acadia National Park, USA (Manning, Facobi, and Marion 62; Holly 28), Yosemite National Park, USA (White 56) and Yosemite National Park (Youngs, White, and Wodrich 805). Bicycle riders can enjoy the natural beauty of national parks, the rural environment of the fringe villages around national park and can experience adventure.

5.9.4 Promotion of Souvenir:

There is ample opportunity for the local people to start souvenir business in the entry points of MNP. Markwick (35) stated that tourists prefer souvenir products produced locally. Considering this behavioural attitude of the tourists, the local people should concentrate on production and sale of handicraft and handloom products as souvenir items. It has been found that people living in the fringe villages are skilled in

handicrafts and handlooms. The skills of the local people can be used to produce souvenir items. Of course, the products should be modernized without changing the traditional touch. MNP has abundant cane, bamboo, water hyacinth, jute etc. which can be used to make different decorative items. Besides, the people of fringe villages cultivate jute, banana, pineapple, coconut in abundant amount. The fiber of these plants can be used for making low cost handicrafts items. Instant photography, photographs of MNP, photograph of different local flowers can be used as souvenir items. MNP has 300 species of butterflies (Choudhury 831). The photograph of those butterflies and insects can be sold as souvenir items.

Required infrastructural facilities for production and selling of souvenir items:

The local people have the skill to produce different souvenir products but they do not have organizational power due to which they are incapable of developing linkage with the tourism industry. By forming Self Help Groups (SHGs) among craftsmen and artists, the local people can setup sale points of souvenir items in the tourist entry points of MNP.

Formation of co-operative society or SHG may be a good strategy to increase linkage of local handloom and handicraft, and other souvenir items with tourism. The local NGOs may motivate the local weavers, craftsmen and farmers to form SHGs and they may be trained accordingly to develop their skill. At the individual level, village people do not have marketing skill. Initially the SHGs can open their outlets at their own home since they have little money to invest. The local NGOs involved in tourism development may act as a bridge between the SHGs and tourists by drawing the tourists to the doors of the houses keeping souvenir items. Besides, the local NGOs may start retail outlets in their tour camps and give the opportunity to local people to sell their products. After formation of SHGs, local weavers and craftsmen will have the capacity to motivate the tour camps for marketing their products or to allow them to open retail outlets at the tour camps.

5.9.5 Local fruits and vegetables:

The villages around MNP are rich in different local fruits and vegetables. Different kinds of fruits viz. Star Fruit (*Averrhoa carambola* L.), Elephant Apple (*Dillenia indica* L.), Indian Gooseberry (*Emblica officinalis* Gaertner), Indian Plum (*Flacourtia jangomas* (Lour.) Raeusch}, Chengmora (*Lasia spinosa* (L.) Thwaites}, Jambul (*Syzygium cumini* (L.) Skeels} are available in the area. Besides, there are 98 types of vegetables viz. Kochu, tora, menmeni, matikaduri, hatikhutura, khutura sak, Ul-kochu, raghu, nekhon tenga, jatak mashi, satmul etc. available in the localities which are used by the local community in their regular diet (Dutta 117). These wild vegetables can be commercialized.

5.9.6 Boating service:

Boating in Manas River can be another possible area for the local youths to get engaged. The Manas River starts from the Bhutan Mountain and flows through MNP. At Mathanguri, the river divides into two parts, one part flows through *Kuhighat* and the other part through Bansbari Forest Range Head Quarter. Though both the streams of the river have potentiality for boating, rafting, and kayaking, the stream that flows from Mathanguri by the Bansbari Range Head Quarter has more potential of supporting such type of tourism activities.

Tourists can enjoy wild animals and natural beauty of the national park by boating in the Manas River. Boating has been a popular recreational activity in many national parks viz. Acadia National Park, USA (Manning, Jacobi, and Marion 64). This kind of activity has been started in the Eastern Range of KNP by some local youths and have succeeded in generating considerable amount of tourism revenue with minimum leakage. This kind of activity will be very effective to generate tourism revenue in MNP too. Besides, the local youths can start adventure tourism mainly river rafting in MNP since the river has moderate rapids. Kayaking may be another possible entry for the local people. Of course, for this kind of activity, training of river rafting, kayaking, boating will be needed. The local NGOs like MMES, MEWS can initiate such type of training programmes for the local youths.

5.9.7 Starting of guiding service:

This is an important area of tourism where the local youths can easily join for their economic empowerment. This activity will help in revenue retention within the local economy. In KNP, about 18 youths have been serving as tour guide and generating significant amount of tourism revenue with zero leakage. Literature also suggests that guiding service has minimum leakage. In Tom Lod village of Northern Thailand, guide service had only 8% leakage (Lacher and Nepal, *From leakages to linkages* 89; *Dependency and development* 959). Of course, for providing guiding service, the local youths are to train up properly, especially in soft skill, knowledge of local history and customs, first aid, safety measures from immediate dangers etc. (Borkotoky 120).

5.9.8 Private-community partnership:

It is already mentioned that people of the fringe villages of MNP are economically poor. Neither they have experience nor the skill to start new tourism business. In such a situation, they can be benefited by adopting Private-Community Partnership model. Examples are found how community-private tourism partnership has benefited the local community in retention of considerable amount of tourism revenue. In early 1990s in Tanzania, Village Councils made legal agreement with tour operators to access village lands in exchange for set payments by the operator. Villages agreed to set aside a concession area where they will not farm or settle. Such agreements served to maintain natural vegetation and prevent land use changes in these ecotourism concession, while villages maintained full land rights and authority over the areas. From this kind of activities, seven villages in Loliondo Division, adjacent to the Serengeti National Park, Tanzania, earned over \$ 300,000 in 2007 (Roe, Nelson, and Sandbrook 31). Likewise at the edge of the Park National Des Volcan, Rwanda, a Private-Community Partnership model was adopted where a community group, Sabyinyo Community Lodge Association (SACOLA), leased their lodge to a Kenyan private company, Musiara Limited to operate the business by making a contract that the company will pay fee \$50 per bed per night and 7.5% of the income of the company. Between August 2007 and February 2008, SACOLA received US \$ 34,500. Besides, the company has provided 70% of the total jobs of the lodge to the local people. They have been purchasing local products from the

community (Roe, Nelson, and Sandbrook 31). There are ample opportunities to make such type of Private-Village or Private-Community Partnership agreement in MNP too. Around MNP there are vast amount of community land. These lands can be given in lease to the private parties for operating tourism business in exchange of commission or share.

5.10 Brief Description of Findings and Proposals:

1. There were 126 tourism businesses under nine different categories in KNP. In MNP, there were eight tourism businesses under three categories.
2. The Tourism Revenue (TR), Leaked Revenue (LR) and Retained Revenue (RR) at KNP were INR 211094380.00 (approx. INR 211.09 million), INR 162844066.00 (approx. INR 162.84 million) and INR 48250314.00 (approx. INR 48.25 million) respectively. The leakage rate was 77.14% at KNP.

Among the different sectors of tourism business, the tour camps earned the maximum revenue (INR 167689607.00, approx. INR 167.69 million, 74.61%). Leaked revenue was also highest in tour camps (INR 142337103.00, approx. INR 142.34 million). The leakage rate was highest in wine shops (92.06 %).

3. At MNP, the TR, LR and RR were INR 10439690.00 (approx. INR 10.44 million), INR 4964405.00 (approx. INR 4.96 million) and INR 5475285.00 (approx. INR 5.48 million) respectively. The leakage rate was 47.55%. Among the different sectors of tourism businesses, the tour camps earned the maximum revenue (INR 8168440, approx. INR 8.17 million). But the leakage rate was highest in case of elephant safari (58.99%).
4. The main causes of leakage of tourism revenue in KNP were lack of local ownership and availability of capital, lack of local employment, lower salaries to local employees, and lack of ability to link local resources to tourism. The

main causes of leakage of tourism revenue in MNP were lack of local ownership, lack of local employment, and lack of ability to link local resources to tourism.

5. As per as KNP is concerned, stakeholders suggested various opportunities for the local people to get engaged in tourism related activities. Most of the stakeholders suggested local people to start home stay accommodation, produce and sell of handicrafts and handloom items as souvenir, starting of bullock cart service for traditional village visit, starting of bicycle service for traditional village visit, produce and sell of local fruits and vegetables, work in existing tourism related businesses viz. front office jobs, cooks, utility etc, involvement in animal husbandry, poultry farming and fishery etc.

In case of MNP, most of the stakeholders suggested local people to promote rural tourism, formation of NGOs to start collectively local traditional way of accommodation, starting of bicycle service for traditional village visit, selling of local fruits and vegetables, starting of private-community partnership tourism business, starting of boating service in Manas River flowing through MNP, and starting of tourist guiding service

6. After practicability study by experts, the study finally formulated probable entries for the local people in tourism related businesses in KNP and MNP. For KNP the probable entries are: home stay facility, supply of folk food and beverage of the local tribes and communities, promotion of folk dance and music, positioning of local souvenir items, supply of local fruits and vegetables and starting of bullock cart safari.

For MNP, the probable entries are: promotion of rural tourism, NGOs run accommodation, bicycle safari, souvenir, sell of local fruits and vegetables and boating service.

CHAPTER-VI
CONCLUSION

CHAPTER VI

CONCLUSION

If tourism has to economically benefit the peripheral local area, promoting linkage between the local economies to tourism industry is crucial (Lacher and Nepal, *Leakages to linkages* 96). Previous studies (Goswami, *Eco-tourism in Kaziranga* 54; Goswami, *Feasibility study*, 15; Borkotoky and Goswami 5) found that the local economy of KNP have enough human and other resources to create linkage with the tourism industry. If the human resources are equipped with required skills, then there will be more opportunities for the local people for employment in the tourism businesses which will ultimately retain tourism revenue within the local economy.

This study has revealed that tourism leakage is not an accurate indicator of sustainability of an economy. Besides leakage, local residents' involvement and their attitude towards tourism are also to be considered. This study has shown that though local economy around KNP has lost a higher percentage of TR compared to that of MNP, the absolute gain received by locals around KNP is much higher. While the periphery does lose a large proportion to tourism revenues, revenue that does stay should prove beneficial for further development (Lacher and Nepal, *Dependency and Development* 964). This is what we have seen in the local economy of KNP, where local people are getting much more benefits from tourism compared to that of MNP.

Between the two tourism destinations, it was found that leakage was higher in case of KNP compared to that of MNP. Of course, in other national parks situated in other parts of the world, the leakage rate is similar to KNP. Leakage rate were 78.5% and 75% in Bwindi National Park, Uganda (Sandbrook, *Local economic impact* 24; *Putting leakages in its place* 124) and 90% in Komodo National Park, Indonesia (Walpole and Goodwin 568). Dependency of the periphery on core area has been identified as the main cause of leakage by number of scholars like Lacher and Nepal (95), Walpole and Goodwin (561). Meyer (*Caribbean tourism* 562). Likewise KNP is also dependent for most of the commodities on the rural Gateway towns. Bokakhat, Jakhlabodha, and Tezpur. For some commodities the high-end tour camps are dependent on Guwahati, the capital city of Assam. Tour camps contributing more than 74% to the tourism revenue.

depend on core areas for different goods and services. Though 44 tour camps out of a total of 64 are owned by local entrepreneurs, more than 90% revenue are generated by the non-local entrepreneurs and the profits are repatriated to the core areas. The tour camps imported most of the commodities from the rural gateway towns. Even the employees from bottom to top positions were from core areas. The retail outlets show similar situation. The retail outlets have to sell those items which cannot be produced locally because of infrastructural lacks of the local economy. Except one, all the souvenir shops were increasingly selling more and more goods that were manufactured in the core instead of locally manufactured goods, though the local economy has enough potentiality to produce those commodities. The entrepreneurs have more confidence on the core economy for every aspect of running their business. It has siphoned away the profits of the tourism business from the periphery to the core areas. The encouraging fact is that boating service, Jeep safari service and the tour guiding services are run by the local youths. But these three services jointly contributed less than 10% of the total tourism revenue in KNP. However, the local residents have understood that for the sustainability of the tourism of KNP, their active involvement is required. Therefore, the participation of local people in tourism has been increasing over the years at KNP. The situation is not similar at MNP. First tourism is not matured in MNP. Secondly local residents still have not considered tourism as their alternative source of income. There is no entrepreneurial attitude among the local people in MNP. Out of six tour camps, only two are locally owned. Even those two are also not run by individual entrepreneurs, but by two local NGOs. The two NGOs are basically involved in conservation and tourism has been started only to meet the expenditure of conservation activities. Of course, they are generating more than 43% of the total tourism revenue generated by tour camps. The only Elephant safari and Jeep safari are initiated recently by the local youths and each has contributed 19.76% and 1.99% of the total tourism revenue respectively. Though the leakage rate is far low compared to that of KNP, it does not indicate that the tourism in MNP is sustainable. Tourism in MNP has neither provided livelihood to the local residents nor contributed on rural development. Thus, leakage is not necessarily the only indicator for successful economic development. In fact, a destination can get more benefits from tourism within a 'high revenue-high leakage' situation than in a 'low

revenue-low leakage' situation (Lacher and Nepal, *From leakages to linkages* 88; *Dependency and development* 953; Weaver, *Alternative to mass tourism* 428). The involvement of local people in tourism is higher in KNP compared to MNP. Accordingly, the generation of tourism revenue, and the resident per capita income are far higher in KNP compared to MNP. Therefore, the advantage of the opportunity offered by the tourism industry is higher in case of KNP.

Tourism in national parks is initiated for conservation purpose (Walpole and Goodwin 560). The dependency of the local residents on protected areas can be changed if they are provided alternative source of livelihood (Sekhar 340). Tourism is regarded as an important source of livelihood for the people living across national parks and hence can be used as a strategy for biodiversity conservation (Kiss 232). Tourism is successfully implemented as a strategy of conservation in KNP. It is renowned for its conservation records (Saikia, Arupjyoti 113). Tourism has provided considerable revenue and employment to the local residents which in turn have motivated local people to work for conservation of the national park. On the other hand the conservation history of MNP is not good. It was declared as World Heritage Site in Danger by UNESCO in 1989. Of course, the situation has changed. People are becoming aware regarding conservation. Besides, local residents started to realize that tourism may be the alternative source of livelihood for them. The NGOs working in MNP have played an important role in creating awareness regarding conservation and tourism.

For reducing dependency of the local economy on core areas, the control over the tourism should be shifted to the local residents. This is possible when the local economy can meet the demand of the tourism industry and reduce the reliance on core areas for resources. The local economy is rich enough but the issue is that there is no linkage between the local resources with the tourism industry. Besides, the local entrepreneur should be sensitized to engage only local people. They should be made to realize that it is their social responsibility to think about the benefits of the local people.

Tourism businesses can survive in these areas as long as the national parks are conserved so that they can attract visitors. Conservation of national parks is an extremely difficult task without the involvement of the local people. And local people will be motivated to get involved in conservation activities only when they receive benefits from

the national park in the form of remuneration for their services used by the tourism industry. The entrepreneurs in the areas, including the non-local ones, should understand this and start relying more on the local resources, including human resource for running their business ventures.

This study puts forward a number of strategies to increase local residents' participation and increase linkage between tourism industry and local resources. The strategies suggested for KNP cannot be replicated in MNP because the strategies are developed on the basis of the availability of resources in the fringe villages of the respective national parks. Though most of the people are dependent on agriculture in KNP, the local people have the capacity to provide home-stay accommodation to the tourists. It was found during the survey that the demand for accommodation has been rising and all tourists cannot afford high-end tour camps. This situation provides an opportunities for the local residents to start this activity. The demographical pattern of the people living around KNP is suitable for adopting specific strategy. Different ethnic tribes viz. *Mishing*, *Karbi*, *Adibasi* (tea tribe) are living around KNP. Their traditional food and beverages can be promoted to the tourists. This will not only increase local participation in tourism, but also enhance the economic benefits to the people. The tribes have unique culture and tradition. Now-a-days demand for cultural tourism has been increasing. By taking this advantage, the ethnic villages can be centre for cultural activities for tourists to experience unique culture. Around KNP, only one souvenir shop is there which purchases all its items from local craftsmen and hand-loom workers and have been sustaining by generating considerable income. People are skilled in wood carving, bamboo work, and handloom work. These skills can be linked up with the souvenir shops. Besides, the local residents can be motivated to sell local fruits, vegetables, and local tea. There is also potentiality of starting bullock cart safari outside KNP by which tourists can enjoy the beauty of ethnic villages and tea gardens scattered around the national park.

The situation is not similar in MNP. The demographic pattern of the people, the natural and scenic beauty of MNP and its surrounding areas are very suitable for developing rural tourism. The adjoining villages of MNP are dominated by Bodo tribe. They are very rich in their ethnic culture and tradition. Their uniqueness can be

positioned as a tourism product. The economic condition of the people living in the villages around MNP is not sound. Besides, they are not aware towards tourism. Therefore, it is not possible for them to start tourism businesses individually. In such a situation, local NGOs specially the tour camps can start tourism business. Already two NGOs have started it and been successful. This activity can be started by other NGOs also. Besides, the Manas River is very suitable for kayaking, boating, and rafting. The local youths can start these activities after proper training.

Thus, it has been found that though there is very high amount of leakage in tourism revenue in KNP and MNP, the leakage can be manageable. There is potentiality to reduce leakage by adopting destination level strategies. Where as other studies quantified leakage from local economy (Sandbrook, *Putting leakages in its place* 130-131; Walpole and Goodwin 569; Lacher and Nepal, *From leakages to linkages* 89; *Dependency and development* 959), the present study has not only quantified leakage from local economy but also developed some local level strategies those are based on the resources available in the local economy. The uniqueness of these strategies is that these can be controlled by the local stakeholders only. Thus the strategies neither destroy biodiversity or environment nor need any external assistance to implement those strategies. The strategies will make the tourism more sustainable.

For proper implementation of the above strategies, it is important to train local people. Areas in which the local population are to be trained have been identified and listed. The identified areas are on the basis of literature review and discussion with various experts and stakeholders. They are discussed below:

1. Communication skill including knowledge of spoken English: The tourism industry is basically a service based industry and it needs constant interaction between the service provider and the service taker. Lack of communication skill may lead to dissatisfaction among the tourists. Moreover, English is a language that is understood to some extent by foreign tourists coming from any country. Therefore, language training is must for the local residents (Walpole and Goodwin 573).

4. Food preparation: The people living in the fringe village of KNP and MNP are skilled in preparation of ethnic food. For generating and maintaining tourists' demand, it is necessary to train up the local people so that the quality and the standard of the products are maintained. They should be given training on exploiting smells, flavours, taste of the meal. Besides, they can be trained on how to mix the continental food preparation with the locals' ethnic food (Ashley, Goodwin, McNab, Scott and Chaves).

5. Presentation skill: It is important to know how food should be presented to the tourists. Presentation skill is regarded as an important factor that encourage sale of local foods (Ashley, Goodwin, McNab, Scott and Chaves).

6. Handlooms and Craft working: The local youths should be trained up in craft work, textile work and weaving so that they can produce attractive souvenir items. They should be trained up on product innovation: combining local skills with modern preferences. KNP is famous for its one horned rhinoceros. Likewise, MNP is famous for Pygmy hog, Bengal Florican, Pangolin and Assam roofed turtle. Therefore, training in woodcarving technique should be provided to the local youths so that they can produce models of Rhinoceros, Pygmy hog, Bengal Florican, Pangolin, Assam roofed turtle and other endangered species. Such kind of training scheme was implemented in a village, *Kampung Komodo*, adjoined to Komodo National Park, Indonesia, where a group of villagers were trained in woodcarving technique to supply the demand for dragon carving (Walpole and Goodwin 573).

7. Packaging: In case of the locally produced souvenir items and agro-based food items, packaging is an integral part. Therefore, the local producers should be trained on packaging. Packaging is regarded as one of the important factors that encourages purchase of local craft, food, and other products (Ashley, Goodwin, McNab, Scott and Chaves).

Contribution of the study to existing body of knowledge:

Literature survey revealed that the studies undertaken on leakage were theoretical rather than empirical and most of the studies were based on either international scale or national scale. Of course a few studies on small scale village level economy are available. Addition to those studies, the present study has been carried out in two tourism destinations giving emphasis on the adjoining villages of two National Parks of Assam, Kaziranga and Manas National Parks. Like other local level studies undertaken by Walpole and Goodwin (563-565), Lacher and Nepal (*From leakages to linkages* 87-88; *Dependency and Development* 954-956), Lacher (12-15), and Sandbrook (*Putting leakages in its place* 127-129), the present study also estimated TR, LR, RR and leakage rate by doing census survey of tourism businesses. This study has extended itself to identify the causes of leakage in the local level economy separately for KNP and MNP. Besides, on the basis of availability of resources in the concerned economy, the present study developed some local level strategies that are compatible to the local situation. The strategies developed for KNP cannot be replicated at MNP. These strategies are tailor made to the destination concerned. This study suggests such kind of strategies that rely less on the support of external stakeholders. This is the novelty of the study and is the most vital contribution of the study to the existing body of knowledge. While the other studies quantified leakage in a single national park, this study has compared and contrasted two national parks of Assam. Comparing the leakage rate of two national parks at two different stages of the destination lifecycle is a major contribution to the existing body of knowledge.

Besides, quantifying leakage at the local level economy based on national park, this study has examined how tourism revenue is distributed within different tourism businesses operational in local economy. Previous studies (Sandbrook, *Putting leakages in its place* 131; Walpole and Goodwin 569) estimated leakage for the local economy as a whole. The present study, besides quantifying leakage as a whole for the local economy, quantified leakage separately for each categories of tourism business, viz. tour camps, restaurants, souvenir shops, jeep safari, elephant safari, wine shops, retail outlets, boating, tour guide etc. This distributional assessment of leakage is another contribution to the existing body of the knowledge.

It is widely argued that high level of revenue leakages make tourism an inappropriate tool for economic development in a poor economy (Lacher and Nepal, *From leakages to linkages* 79; Linderberg, Enriquez and Sproule 559; Khan 990; Weaver, *Peripheries of the Periphery* 305; Mbaiwa 165; Nyaupane, Morais, and Dowler 1375). The result found in KNP and MNP has showed the same proposition. Due to very high amount of leakage in KNP and MNP, the economic benefits the local people received from tourism are not satisfactory. The resident per capita income was only INR 1222.92 per annum and INR 121.20 per annum in KNP and MNP respectively. Of course, the leakage rate is higher in KNP compared to that of MNP. This is because, tourism is matured in KNP whereas tourism is in still at nascent stage in MNP. At the initial stage of tourism, leakage is found minimum. But as it becomes mature, leakage is started to rise.

It is already mentioned in Chapter I that tourism in national parks is encouraged for the conservation purpose so that local people living in the fringe villages of national parks are benefited by tourism (Archabald and Treves 135; Sekhar 339; Walpole, Goodwin and Ward 219; Walpole and Goodwin 560; Scheyvens, *Ecotourism* 246). Only then the local community will protect the wild animals and other resources. If tourism does not help the local community, they may not reduce their dependency on forest resources and, therefore, conservation may be affected. Though tourism of KNP has contributed a lot to the local economy, there is a huge gap where the local residents still have to work for their own benefits. Though the number of tour camps owned by local residents was higher than the number of tour camps owned by the non-local actors in KNP, the share of the total tourism revenue generated by the non-local firm was much higher. During the interaction with the managers and owners of the tour camps owned by local actors, it has been found in both the study areas that they have poor network with the tour operators and tour agents. Of course, in case of the restaurants, boating service, and jeep safari service, the local actors were playing the dominant role. But, the tourism revenue generated by these services is far below the tourism revenue generated by the tour camps owned by the non-local.

Contribution in policy making:

The results of the study will be beneficial to policy makers. They can utilize the findings of the study for future tourism planning and local area development. Already the government has spent huge amount of money for tourism development at KNP and MNP with the intension of providing benefits to local people and thereby strengthening the conservation effort. For conservation of protected areas like national parks, local community's benefit is must. But, investment in tourism does not mean that it will benefit local community. The study has highlighted the area on which the policy makers should concentrate to achieve this goal. Besides, the study has identified some important areas where the local residents and entrepreneurs should concentrate.

Scope for further research:

Further research may be undertaken on the consecutive rounds of leakage on the local level economy. As the present study is exploratory research, only first round of economic impact has been assessed. Through multiplier analysis leakage can be estimated in different rounds in stead of in only one round.

While the present study quantified leakage in local economy, further research can be undertaken to determine the extent of revenue leakage at regional, national, and international scale which would be an interesting research topic in the future. Several studies viz. Lacher and Nepal (*Dependency and development: From leakages to linkages*) have emphasized the importance of distributing of tourism income amongst the entire economy of a village. Additionally, the distribution of tourism revenue between the genders could be checked.

Further research should focus on the sustainability of local culture. The heavy dependency on tourism may affect the local culture and customs, and local natural environment of the destinations. These may be another area of further research.

If tourism has to economically benefit the peripheral local area, promoting linkage between the local economies to tourism industry is crucial (Lacher and Nepal, *Leakages to linkages* 96). Of course, this is usually difficult as the periphery normally does not produce the superior quality goods and proficient services that the tourism industry

demands. However this study shows how the local level strategies compatible to fringe villages of a National Park can be developed to minimize leakage.

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ANNEXURES

ANNEXURE I:
Interview schedule for tour camps

(Please give tick mark 'V' where necessary)

1. Name of the tour camp:-----
2. Address:-----
3. Year of establishment:
4. Types of ownership: Private/Govt./ Partnership/NGO/Other (Please specify)
5. A) Residence of the owner of the establishment:
B) Local/Non-local
6. Season for the tourist? From Month _____ to Month _____
7. Average no. of tourists visited in the last season: Foreigners : _____ Indian: _____ Total: _____
8. Average stayed:

Tourists	Days	Over Night stays	Break fast	Launch	Dinner
Indian					
Foreign					

9. Types and tariff of lodging:

Type		Tariff per tourist/room	Total rooms	No. of beds per rooms	Total Tourists	Average lodging	Total revenue
Cottage	Indian						
	Foreigner						
Suite	Indian						
	Foreigner						
Deluxe supper	Indian						
	Foreigner						
Deluxe	Indian						
	Foreigner						
Economy	Indian						
	Foreigner						
Dormitory	Indian						
	Foreigner						
Tent	Indian						
	Foreigner						
Executive	Indian						
	Foreigner						
Other	Indian						
	Foreigner						
Total							

10. Spatial distribution of expenditure of lodging:

Expenditure pattern		Price/ Rate	Purchase From	Manufactured in	Quantity	Total
Electricity						
Fuel						
Other (Please specify)						
Cable TV/DTH						
Telephone/mobile						
House keeping items	Mosquito liquid					
	Hit					
	Room freshener					
	Bath soap					
	Naphthalene					
	Napkin paper					
	Laundry					
Other						
Total						

11. Do you have food service? Yes/No. If yes please provide the following information

Types			Price		Quantity		Total
			Veg.	Non	Veg.	Non	
Dishes	Ethnic	Breakfast					
		Lunch					
		Dinner					
	North Indian	Breakfast					
		Lunch					
		Dinner					
	South Indian	Breakfast					
		Lunch					
		Dinner					
	Contin- ental	Breakfast					
		Lunch					
		Dinner					
	Chinese	Breakfast					
		Lunch					
		Dinner					
Other	Breakfast						
	Lunch						
	Dinner						
Beverage	Packaged water						
	Cold drinks						
	Packaged milk						
	Loose milk						
	Curd						
	Fruit juice						
	Coffee						
	Tea						
Total:							

12. Spatial distribution of expenditure in food:

Spatial distribution of expenditure on purchasing of raw food items and beverage:						
Types		Purchase from*	Manufactured in*	Quantity	Rate in Rs	Total
Non-veg	Mutton					
	Pork					
	Chicken					
	Fish					
	Egg					
Vegetable						
Grocery items	Rice					
	Edible oil					
	Sugar					
	Cereal					
	Salt					
	Soya					
	Papir					
	Chowmin					
	Megi					
	Wheat					
	Vim bar					
	Biscuits					
	Napkin papers					
	Other					
LPG						
Firewood						
Other						
Beverage	Packed milk					
	Loose milk					
	Curd					
	Coke					
	Fruits juice					
	Tea					
	Coffee					
	Others					
Total						

13. Types of employment

Sl No	Cadre	Age	Gender	Number	Place of origin	Salary pm	Total
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Total							

14. How many years have you purchased the requirements from the mentioned sources? -----
15. Please provide the following information
- Name of the respondent:
- Designation of the respondent:
- Contact number:
16. Investigators observations related to the objectives:

**ANNEXURE II:
Interview schedule for restaurants**

(Please give tick mark 'V' where necessary)

1. Name of the restaurant/*Dhaba* :
2. Address:
3. Year of establishment:
4. Types of ownership: Private/Govt./ Partnership/NGO/Other (Please specify)
5. A) Residence of the owner of the establishment:
B) Local/Non-local
6. Source of revenue:

Types			Price		Quantity		Total
			Veg.	Non	Veg.	Non	
Dishes	Ethnic	Breakfast					
		Lunch					
		Dinner					
	North Indian	Breakfast					
		Lunch					
		Dinner					
	South Indian	Breakfast					
		Lunch					
		Dinner					
	Continental	Breakfast					
		Lunch					
		Dinner					
	Chinese	Breakfast					
		Lunch					
		Dinner					
Other	Breakfast						
	Lunch						
	Dinner						
Beverage	Packaged water						
	Cold drinks						
	Packaged milk						
	Loose milk						
	Curd						
	Fruit juice						
	Coffee						
	Tea						
Total:							

7. Spatial distribution of expenditure:

Types/Items		Purchase from*	Manufactured in*	Quantity	Rate Rs	Total
Non-veg						
Vegetable						
Grocery items						
	Other					
LPG						
Firewood						
Other						
Beverage						
	Others					
Total						

8. Types of employment

Sl No	Cadre	Age	Gender	Number	Place of origin	Salary pm	Total
1							
2							
3							
4							
5							
Total							

9. How many years have you purchased the requirements from the mentioned sources? -----
10. Please provide the following information
 Name of the respondent:
 Designation of the respondent:
 Contact number:
11. Investigators observations related to the objectives:

**ANNEXURE III:
Interview schedule for Jeep safari**

1. Name of the **Jeep safari association**:-----
2. Address:-----
3. Year of establishment:
4. Types of ownership: Private/Govt./ Partnership/NGO/Other (Please specify)
5. Residence of the owners of the establishment:
6. Revenue per season.....
7. Revenue per season.....

No. of Vehicle	Tariff per trip	Total revenue

8. Spatial distribution of expenditure

Expenditure pattern	Amount	Place of cost	Total
Driver's wage			
Handymen's wage			
Fuel			
Parking charge			
Other			
Total			

9. Employment status:

Position	Salary p.m.	No. of workers	Residence	Total
Total				

ANNEXURE IV:
Interview schedule for Elephant safari

1. Name of the **Elephant safari association**:-----
2. Address:-----
3. Year of establishment:
4. Types of ownership: Private/Govt./ Partnership/NGO/Other (Please specify)
5. Residence of the owners of the establishment:
6. Revenue per season.....

No. of Elephant	Tariff per trip	Total revenue

7. Spatial distribution of expenditure

Expenditure pattern	Amount	Place of cost	Total
Elephant trainer's wage			
Grass cutter's wage			
Medicine of elephant			
Animal food			
Rent of Elephant			
Other			
Total			

8. Employment status:

Position	Salary p.m.	No. of workers	Residence	Total
Total				

ANNEXURE V:
Interview schedule for Boating

1. Name of the Boating service provider:-----
2. Address:-----
3. Year of establishment:
4. Types of ownership: Private/Govt./ Partnership/NGO/Other (Please specify)
5. Residence of the owners of the establishment:
6. Revenue per saison.....

No. of Boat	Tariff per trip	Total revenue

7. Spatial distribution of expenditure

Expenditure pattern	Amount	Place of cost	Total
Driver's wage			
Handymen's wage			
Fuel			
Other			
Total			

8. Employment status:

Position	Salary p.m.	No. of workers	Residence	Total
Total				

ANNEXURE VI:
Interview schedule for Wine shop

1. Name of the **Business Establishment**:-----
2. Address:-----
3. Year of establishment:
4. Types of ownership: Private/Govt./ Partnership/NGO/Other (Please specify)
5. Residence of the owners of the establishment:
6. Revenue per season.....
7. Spatial distribution of expenditure

Expenditure pattern	Amount	Place of cost	Total
Raw materials cost			
House Rent			
Electricity			
Mobile			
TV			
Other			
Total			

8. Employment status:

Position	Salary p.m.	No. of workers	Residence	Total
Total				

ANNEXURE VII:
Interview schedule for Retail outlets

- 1) Name of the **Business Establishment**:-----
- 2) **Address**:-----
- 3) Year of establishment:
- 4) Types of ownership: Private/Govt./ Partnership/NGO/Other (Please specify)
- 5) Residence of the owners of the establishment:
- 6) Revenue per season.....
- 7) Spatial distribution of expenditure

Expenditure pattern	Amount	Place of cost	Total
Raw materials cost			
House Rent			
Electricity			
Mobile			
T V			
Other			
Total			

- 8) Employment status:

Position	Salary p.m.	No. of workers	Residence	Total
Total				

ANNEXURE VIII:
Interview schedule for souvenir shop

1. Name of the souvenir shop:-----
2. Address:-----
3. Year of establishment:
4. Types of ownership: Private/Govt./ Partnership/NGO/Other (Please specify)
5. Residence of the owner of the establishment:
6. Source of revenue from the following

1. A). Source of revenue						
Types		Purchase From	Manufactured In	Retail Price (Rs)	Quantity Sold	Total Revenue
Handicrafts	Wooden items					
	Cane & Bamboo					
	Bell metal					
	Brass metal					
	Earthen pots & idols					
	<i>Dhol & Khal</i>					
	Other (specify)					
Handlooms	<i>Gamosha</i>					
	<i>Chadar mekhela</i>					
	<i>Cheleng</i>					
	<i>Eri-chal</i>					
	<i>Show piece</i>					
	Other (specify)					
Total						

7. Expenditure pattern

Expenditure pattern	Total Expenditure
Raw materials of the items sold	
Electricity	
Fuel cost	
Cable TV	
Telephone/Mobile	
Transportation	
House rent	
Other	
Total	

8. Employment pattern

Sl No	Cadre	Age	Gender	Number	Place of origin	Salary pm	Total
1							
2							
3							
4							
5							
Total							

9. How many years have you purchased the requirements from the mentioned sources?

10. Please provide the following information

Name of the respondent:

Designation of the respondent:

Add:

Contact number:

11. Investigators observation related to the objectives:

ANNEXURE IX:
Interview schedule for Tourists

1. Name:
2. Place of origin: Name of the country:
3. Address (optional):
4. Would you please furnish the following personal details?
 Age: 20 – 30; 30 – 45; 45 – 60; above 60
 Gender: Male/Female Occupation: Income (approx):
5. Name of the tour camps where you spent:
6. How many days have you stayed in this area : Days:Nights:.....
7. How many times have you taken food? (Please tick)
 Breakfast: 1/2/3/4/5/6/7/8/Lunch: 1/2/3/4/5/6/7/8.....
 Dinner: 1/2/3/4/5/6/7/8/.....
 Tea: 1/2/3/4/5/6/7/8/9/10/.....Coffee: 1/2/3/4/5/6/7/8/9/10/.....
8. Packaged Tour/ Individual tour/Official tour/ Other
9. How much did you spend on the services mentioned below?
 A)How much did you spend in lodging? Per day:Total:
 B)How much money did you spend in the following items?

Service	Spending in Rs	Service	Spending in Rs
Breakfast		Mobile phone recharging	
Dinner		Medicine	
Lunch		Bottled water	
Tea/coffee		Wine	
Souvenir		Saloon	
Smoking		<i>Paan-masala</i>	
Cold drinks		Donation	
Laundry		Guide	
Tips		Driver	
Other			

C) How much did you spend on the services mentioned below?

Service	Spending in Rs	Service	Spending in Rs
Jeep Safari		Cultural programme	
Elephant safari		Others (Please specify)	

10. How much amount did you spend for your tour guides or drivers accompanied you to the park in terms of wage, food and other activities?

- a) No accompanying tour guide or driver
 b) Paid: Rs(for accompanying drivers)
 c) Paid: Rs(for accompanying tour guide)

11. What type of facilities have you used so far? (please tick)

Jeep safari	Elephant safari	Trekking	Tea garden visit
Traditional village visit	Tribal village visit	Cultural show	Traditional Food
Traditional Games	Bird Watching	Traditional Lodging	Other specify

12. What is your opinion on above mentioned facilities

(please tick according to your preference)

1 – poor 2 – average 3 – o.k. 4 – good 5 – very good

Services	1	2	3	4	5
Jeep safari					
Elephant safari					
Trekking					
Tea garden visit					
Traditional village visit					
Tribal village visit					
Cultural show					
Traditional Food					
Traditional Games					
Bird Watching					
Traditional Lodging					

Annexure X
Lists of villages with populations of KNP

Name of the fringe villages of Kaziranga National Park				
Range		Village name	Households	Population
Bagori	1.	Bagori	278	1223
	2.	Bagori nc	40	203
	3.	Harmoti no 1	259	1394
	4.	Harmoti no 2	107	520
	5.	Najan	441	2137
	6.	Kuthori	170	777
	7.	Najan nc	47	258
	8.	Bandardubi	214	1285
	9.	Baghmari	146	703
	10.	Pub deopani	56	455
	11.	Dakhin deopani	21	88
	12.	Kanchanjuri	58	248
	13.	Naharubasti	77	336
Burapahar	14.	Burapahar gaon no1	12	54
	15.	Burapahar gaon no2	62	282
	16.	Deusurchang	207	1078
	17.	Paalkhowa	5	35
	18.	Kawoimari	5	32
	19.	Phulaguri chang	219	1051
	20.	Amguri chang	157	767
	21.	Natun danga	124	598
	22.	Amguri gaon	86	349
	23.	Rangaloo	209	923
	24.	Kuthori nabasti	153	673
	25.	Kolongmuch nc	24	23
	26.	Chaguri	0	0

Range		Village name	Households	Population	
Kohora	27	Halodhibari	85	397	
	28	Kaziranga nc	32	240	
	29	Hatikholi bagisa	905	4124	
	30	No. 1 sildubi	126	596	
	31	No. 1 kohora	413	1899	
	32	No. 2 kohora	124	672	
	33	Mohpora	104	529	
	34	Lukhura khonia	79	384	
	35	No.1 dumjan	68	341	
	36	No. 2 dumjan	28	145	
	37	Gusanibor	229	1071	
	Agoratoli	38	Bamun gaon	47	319
		39	Beloguri	162	956
40		Agaratoli	32	186	
41		Bohikhuwa	493	2346	
42		Kandhulimari	316	1602	
43		Tamulipathar	97	529	
44		Japori pather	63	297	
45		Difoolu pather	526	2334	
46		Borjuri bagisa	244	1201	
47		Borjuri gaon	304	1462	
48		Methoni	371	1749	
49		Siljuri gaon	138	584	
		Total	8163	39455	

Annexure XI
List of villages with population of MNP

Sl No.	Village	House	Population
1.	Agrang gaon	92	506
2.	Madanguri gaon	58	332
3.	Laharipara	36	213
4.	Bamunkhal	68	352
5.	Kumguri	76	456
6.	Bhuyapara	131	759
7.	Karoibari	78	452
8.	Khucharatari	96	576
9.	Dongpara	71	411
10.	Bargaon	176	968
11.	Natun bargain	78	429
12.	Rabong kuntabari	150	750
13.	Thaijuguri betbari	139	723
14.	Majarbari	120	660
15.	Lanthaibari	50	285
16.	Rangidora	74	407
17.	Barkhagra	125	712
18.	Sarukhagra	45	261
19.	Shimlaguri	40	220
20.	Garumara	200	1160
21.	Nabadihira	146	730
22.	Chalchali	125	644
23.	2no koklabari	64	358
24.	Daodhara	92	478
25.	Khamarduisha	300	1500
26.	Mazamakha	37	198
27.	Bhaguri	88	484

Sl No.	Village	House	Population
28.	Alengamari	100	530
29.	Athkhari	37	223
30.	Bandaguri	40	201
31.	Barengabari	140	732
32.	Bhalaguri	73	376
33.	Daokijan	120	652
34.	Pub chengmari	71	375
35.	Gyati gaon	143	806
36.	Gohair bhita	49	277
37.	Kahibari	83	506
38.	Kahitema gaon	59	334
39.	Kahitema pathar	49	269
40.	Katajhar	32	144
41.	Khagrabari nc	39	212
42.	Kamlabari	101	594
43.	Kuthurijhar	196	1052
44.	Labdunguri gaon	186	996
45.	Labdunguri pathar	91	527
46.	Labdungpara	41	209
47.	Madrijara	43	223
48.	Mayangpara	325	1768
49.	Narayanguri	144	788
50.	Bishpani	145	878
51.	Oxiguri gaon	189	1026
52.	Oxiguri pathar	59	367
53.	Paichiguri	159	1002
54.	Raghbil	215	1112

Sl No.	Village	House	Population
55.	Chunbari	167	935
56.	Chanthaibari	57	336
57.	Raja beel	221	1255
58.	Abdaguri no1	120	662
59.	Barpathar no1	244	1170
60.	Barpathar no2	115	591
61.	Barshijhar	70	334
62.	Bhatarmari	74	365
63.	Bagidara no1	231	1248
64.	Bagidara no2	117	652
65.	Baulajhar no1	136	869
66.	Baulajhar no 2	211	1145
67.	Burisuti no1	28	175
68.	Burisuti no2	21	119
69.	Chaurang no1	84	421
70.	Chaurang no2	75	364
71.	Chaurang no4	53	267
72.	Dilong no1	98	484
73.	Garabdara no1	50	278
74.	Garabdara no2	51	268
75.	Kachubeel no1	86	432
76.	Kachubeel no2	68	339
77.	Lakhijhara no1	99	485
78.	Thisobari no1	26	114
79.	Thaishobari no2	58	268
	Total	8244	44779

Annexure XII
Name of the stakeholders interviewed in KNP and MNP

Stakeholders for KNP	Stakeholders for MNP
1. J. N. Senapati, Deputy Director, Tourism, Government of Assam	1. J. N. Senapati, Deputy Director, Tourism, Government of Assam
2. Sajad Ali Ahmed, Deputy Director, ATDC	2. C. Bhobora, Deputy Director, Manas Tiger Project
3. Sunil Dutta, Ex-Director, Kaziranga National Park	3. K Ahmed, Forest Range Officer, Bansbari Range, MNP
4. D. Bora, Forest Range Officer, Agoratoli Range, KNP	4. Sanjit Das, Secretary, Florican Cottage (MMES), MNP
5. Nilim Baruah, Tourism Officer, ATDC,	5. Bubul Das, tourism in charge, MEWS
6. Tulsi Gogoi, Secretary, Kaziranga Development and Jeep Safari Association (Kohora Range)	6. C. K. Basumatary, President, Thongbeg Jungle Camp, MMES.
7. Punen Gogoi, President, Kaziranga Elephant Safari Association (Bagori Range)	7. Dhanjit Das, Advisor, Manas Jeep Safari Association, MNP
8. Amar Jyoti Bora, President, Bagori Jeep Safari Association.	8. Sanjay Nath, Manas Jeep Safari Association, MNP
9. Ranjit Kalita, President, Agoratoli Jeep Safari and Elephant Safari Association.	9. Nayan Das, President, Manas Elephant Safari Association and the President of the NGO, ANAJAREE.
10. AK Baruah, Owner, Wildgrass.	10. Dhiraj Choudhury, Owner, Birina
11. A. R. Baroah, Manager, Landmark wood	11. Bijay Basumatary, Manager, Birina Lodge, MNP
12. Pankaj Gogoi, Owner, Pelican Dhaba,	12. Nicodim Nergery, Manas View Jungle Resort, MNP
13. Hari Prasad Gogoi, Owner, Cleans, Souvenir Shop	13. Dr. Manjit Das, Associate Professor, Bodoland University
14. S. Saha, Owner, Kaziranga Studio, Souvenir shop.	14. Gokul Basumatari. Rajabari Haribilash, Lakshi Bazar. Bhuyanpara Range, MNP
15. Rupjyoti Bora, President, <i>aparajita</i> , SHG, Kaziranga and owner of <i>Kaziranga Haat</i> , Souvenir shop.	
16. Pabitra Gogoi, Tour guide.	
17. Trishna Nath, Tour guide	
18. Khanjan Nath, President, Kaziranga Suraksya Samity and Owner of Home stay.	

Annexure XIII
Expert Panel for KNP and MNP

Expert Panel for KNP and MNP		
	KNP	MNP
1.	J. Senapati	J. Senapati
2.	S. Dutta	Chittaranjan Bhopora,
3.	a. Khanjan Nath b. Tulsi Gogoi, c. Punen Gogoi d. Amar Jyoti Bora e. Ranjit Kalita f. Hari Prasad Gogoi g. S. Saha h. Rupjyoti Bora i. Pabitra Gogoi j. Trishna Nath	a. Sanjit Das b. Gokul Basumatari c. Babul Nath d. Dhanjit Das e. Nayan Das f. Bijay Choudhury g. Sanjay Nath h. C. K. Basumatary i. Nicodim Nergery j. Bijay Basumatary

Annexure XIV
Name of the tour camps in KNP

Sl no	Name of tour camp	Sl no	Name of tour camp
1.	Wild Reach Eco-Resort	36.	Kaziranga Resort
2.	GI Resort	37.	Dhanshiri
3.	Land Mark Wood	38.	Babul Bora Home Stay
4.	Camp Rhino Eco-Resort	39.	Banhabi
5.	Diphalu River Lodge	40.	Regal Guest House
6.	Grass Land Hotel	41.	Sarmah Guest House
7.	Green Ahiyana Resort	42.	Resort Green Reed
8.	Park Resort	43.	Ma Kamala
9.	Talukdar Guest House	44.	Holiday Home (RBI)
10.	Brindaban Dhaba	45.	Cottage Hrishikesh
11.	Chikuni Bhawan	46.	Emerald
12.	Drongo Guest House	47.	Unicorn Cottage
13.	Anabil Lodge	48.	IORA
14.	Rhino Guest House	49.	Alahighar
15.	Namdang	50.	Palash Gogoi Home Stay
16.	Luit Hazariaka Home Stay	51.	Niribili
17.	Nightingale Nest Lodge	52.	Nature Hunt
18.	Sneha Lodge	53.	Barasha
19.	Kaziranga Florican Lodge	54.	Resort Elephanta
20.	Shanty Lodge	55.	Wild Grass
21.	Kaziranga Guest House	56.	Manoj Gogoi Lodge
22.	Rubi Lodge	57.	Dilip Gogoi Home Stay
23.	Prasanti Tourist Lodge	58.	Jiten Choudhury
24.	Kaziranga Wildlife Society Lodge	59.	Samir Choudhury
25.	Aranya	60.	Lukai Gogoi
26.	Jupur Ghar Cottage	61.	Godharam Gogoi
27.	Banani, Banshree & Kunjaban	62.	Khanjan Nath Homestay
28.	Prasanti Cottage	63.	Tara Devi Home Stay
29.	DRDA	64.	Dhanshiri Eco-Camp
30.	Hornbill	65.	Resort Madhuban (Closed)
31.	Deuta Lodge	66.	Heritage Nest Resort (Closed)
32.	Arimora Guest House	67.	Kaziranga Jungle Camp (Closed)
33.	Sunil Baruah Home Stay	68.	Ashraya (Closed)
34.	Kumud Bora Home Stay	69.	Spring Valley (Closed)
35.	J.S. Resort	70.	Ribigaseng Resort (Closed)

Annexure XV
Photo of field survey



Elephant safari: KNP



Group interview with local experts: MNP



Jupuri Ghar (PPP tour camp), KNP



Souvenir shop constructed by NEDFi



Aparajita (SHG)'s production centre of handlooms items (KNP)



Rural Business Hub
(PPP model for training local women on craft and handlooms)

**Annexure XVI:
Email to the author**

From: **Joel Heinen** heinenj@fiu.edu
To: Birinchi K Choudhury <birinchitezu@gmail.com>
Date: Sat, Mar 8, 2014 at 5:09 AM
Mailed-by: fiu.edu

Birinchi

My best advice would be to consult a PhD in statistics to ask this question. While it is true that if you census a whole population, there is usually no issue with statistics, it is also true that it depends on what you consider the whole population of potential inter-actors with a park or wildlife reserve.

So, ask a stats prof, and see what that person says.

Dr. Joel Heinen, Professor
Department of Earth and Environment, ECS 345
Florida International University, 11200 SW 8th Street, Miami, FL, 33199
Phone: 305-348-3732; Fax: 305-348-6137; email: heinenj@fiu.edu
<http://casgroup.fiu.edu/earthenvironment/index.php>

From: **Sanjay Nepal** snepal@uwaterloo.ca
To: Birinchi K Choudhury <birinchitezu@gmail.com>
Date: Thu, Mar 6, 2014 at 7:53 PM
Mailed-by: uwaterloo.ca

Dear Birinchi,

Thanks for the info. If you have conducted a census survey then you don't need to use any stats. However, since you are comparing two national parks, you may want to conduct a test of differences between the two locations. But you can do that even without statistics. My only suggestion is if you have several locations/villages within each national park, treat each location data as a case (example, you have data for ten locations these are ten cases) and then conduct a test of difference between Manas and Kaziranga. If you have data on individual operations (say in Manas 30 operations and in Kaziranga a similar number) you can run the test too.

I hope this helps. We did not use stats in our study mainly because the data across the villages were different in number of cases (some had two few cases to be included in a test).

Thanks
Sanjay

From: **Chris Sandbrook** cgsandbrook@gmail.com
To: Birinchi K Choudhury <birinchitezù@gmail.com>
Date: Thu, Mar 6, 2014 at 7:11 PM
Signed-by: gmail.com

Dear Birinchi,

Thank you for your message and your ongoing interest in my work. Your research project from Kaziranga and Manas sounds fascinating.

It is hard for me to answer your question without knowing a bit more about what you are trying to do. What particular question would you be trying to answer with a statistical test? If all you are doing is coming up with an estimate of overall tourism leakage from these sites, then I don't see any obvious reason to be using statistical tests. However, if you want to compare leakage rates from different types of tourism business, or different sites, or different types of tourist, then yes I think you would need a statistical test to do so.

If you can send any more information I will try to help you if I can.

Best wishes,
Chris

From: **Sanjay K Nepal** sknepal@ag.tamu.edu
To: Birinchi Choudhury <birinchichoudhury@gmail.com>
Date: Mon, Dec 6, 2010 at 7:59 PM
Mailed-by: ag.tamu.edu

Birinchi,

Many thanks for the info, we did not use a questionnaire in the study. I will be off to Waterloo next week and I am extremely busy to help you at this time. I suggest that you devise a method to calculate total income and expenditures (by sources) and find out the flow of money (where does it go - spatially). That should be good.

Contact me once I am at Waterloo sometime late January for any advice.

Good luck!
Sanjay

From: **Chris Sandbrook** cgsandbrook@gmail.com
To: Birinchi K Choudhury <birinchitezu@gmail.com>
Date: Wed, Jan 4, 2012 at 6:06 PM
Mailed-by: gmail.com

Dear Birinchi,

Thanks for your message. It sounds like you are doing everything correctly - the best thing you can do is to cross-check data from multiple sources where possible. Where that isn't possible, there is nothing you can do but take the respondent's word for it. Of course you will need to acknowledge this as a limitation of the study, but there is nothing else that can be done about it! In my PhD study I had to rely on such data from several businesses, and the best I could do was to ask them to show me some records from their own accounts books, like the invoices for food purchases etc. But they may not want to show you these. Alternatively you could try to identify the provider of the food, or other items, and go to ask them how much they have sold to the tourism business in question. I'm afraid in the end it is a bit like piecing together a puzzle, and while you have to be honest that you cannot get a perfect, full picture, you can probably get a good enough idea to justify estimating leakage. To reassure you, in my study I ignored completely whole categories of tourism business spending, like taxation, equipment purchases etc because I realised it would be impossible to get data on them. Instead I simply stated in my methods that I knew my leakage data would be an underestimate as I couldn't measure some things that were spent outside the study area.

I hope that helps - good luck with your degree committee!

Chris

Annexure XVII

PUBLISHED PAPERS

1. **Choudhury, Birinchi,** and Chandan Goswami. "Tourism revenue leakage check". *SCMS Journal of Indian Management*. 10.1(2013): 67-77. ISSN No. : 0973-3167
2. **Choudhury, Birinchi,** and Chandan Goswami. "Local economic impact of tourism based on National Parks: A case study of Kaziranga National Park". *Journal of Social Science Bodoland University*. 1.1(2013): 14-23. ISSN No. : 2320-0952
3. **Choudhury, Birinchi,** and Chandan Goswami. "Community's involvement in rural tourism destinations: A case study of Manas National Park". Ed. Utpal Kumar De and Manjit Das. *Economy of North-East India: Challenges and Tasks Ahead*. Guwahati: Binapani House, (2012): 184-200. ISBN No. 978-81-923239-1-6
4. **Choudhury, Birinchi,** and Chandan Goswami. "Leakage of tourism revenue: A review". *Journal of Social Science Bodoland University*. 2.1 (2014): 81-88. ISSN No. : 2320-0952
5. **Choudhury, Birinchi,** and Chandan Goswami. "Leakage of tourism revenue in Kaziranga National Park". Ed. Manjit Das and Ratul Mahanta. *Development of North-East India: Issues and Dimensions*. New Delhi: Lakshi Publishers and Distributors, (2014): 111-146. ISBN No.: 978-93-82120-28-5