6.1 Introduction

In this chapter, suggestions and conclusions have been drawn on the basis of the analysis of collected primary data from the tourists of Kaziranga National Park.

6.2 Suggestions and Policy Implications

The main objective of this study is to estimate the amount of willing to pay for preservation of Kaziranga National Park. Travel cost and contingent valuation methods are used to estimate this WTP amount and necessary data are collected from the tourists of the park. These estimates help the policy makers in framing proper decision and policies for protection and preservation of the national park.

The estimated consumer surplus is approximately INR 3.21 millions, which is found from zonal travel cost method. It is found that the economic value of the park is approximately INR 5.58 million and INR 5.86 million using dichotomous choice and open ended contingent valuation methods respectively. Keeping in view the large amount of consumer surplus and recreational or economic value of the park, the
Government of India and State Government of Assam should allocate large budgetary resources for preservation of the park.

In Kaziranga National Park, two different entry fees are collected from the visitors – INR 20.00 is collected from Indian visitors and INR 250.00 is collected from the foreigners. But these entry fees are not optimum because the visitors want to contribute over and above their actual expenses for preservation of the park. So the authority of the park can increase the entry fee to an optimum level and this optimum level may or may not be the revenue maximization entry fee. The present study focuses on the revenue maximizing entry fee. If the park authority introduces the revenue maximization entry fee, then it helps in generation of an additional amount of revenue. This additional revenue can be used in solving various maintenance related problems of the national park.

Firstly, in KNP tourist inflow pressure is increasing day by day and construction of hotels and lodges are also increased in a rapid pace to accommodate these increased tourists in the periphery of the southern boundary of the park and these constructions helps in destroying the ancient wild animal corridors, but the tourist flow pressure in other parks and sanctuaries of Assam is very poor. The other parks and sanctuaries of the North East also have their unique wildlife and biodiversity, but these are not famous among the tourists because of lack of promotion and proper advertising. If a well-crafted publicity campaign is conducted to promote eco-tourism side of these parks and sanctuaries, besides imposing a higher entry fee in KNP, a large chunk of visitors would think beyond Kaziranga and visit other parks and sanctuaries of Assam. By doing this
the Government can generate additional funds which can be used for preservation of the wildlife and biodiversity of other parks and sanctuaries of Assam. This would also help in development and promotion of tourism in Assam and consequently help in conservation of ancient wild animal corridors of KNP by reducing the tourists’ inflow pressure to the park.

Secondly, poaching of wild animals is a major problem in front of the park authority and in many cases found that local people are directly or indirectly linked with poachers. The National Park authorities can form a special task force for conservation of wild animals by incorporating (involving) the local people and can give them various types of incentives, awards and remunerations for their performance or activities by means of this additional amount of revenue. This will help to generate productive employment for the local dwellers as well as reduce poaching in the park to a considerable extent.

Thirdly, the Government has given appointment to the home guards as forest guards in KNP and many of them have started leaving their jobs since 2011-12 because of irregular salary payment by the park authorities. The authority can solve this problem of revenue and fund crunch by raising the current level of entry fee so that the additional amount of revenues can also be used for paying salaries to the maintenance staff of the park. So, the Government should develop proper management policy for preservation of the park and for this purpose an optimum level of entry fee should be imposed on the visitors of the park. This entry fee may well be the revenue maximizing entry fee.
There are 23 villages in the neighborhood of the park and total population in the immediate neighborhood of the park is about 0.07 million according to the 2001 Census Report of India. But most of the people are marginal farmers and lie below the line of poverty. On the southern boundary of Kaziranga National Park, almost fifty private and public hotels and lodges are giving services to the visitors. But most of these lodges and hotels are not owned by local people. A very small number of local people are engaged in these hotels and lodges, working at low grade posts and receiving insufficient salaries. So the Government should take initiative in the formation of self-help groups among the people and should involve them in various types of tourism related activities. This will obviously reduce their dependency upon the park for fishing, firewood, etc. This would help in preservation of the ecosystem of KNP.

As far as recreation in KNP is concerned, there is mainly one option available to the visitors – that is viewing wild life in the Park. After going through elephant rides or Jeep safari for viewing wild animals, the tourists have little option for recreation in KNP. This is basically why most of the visitors have a tendency of staying only one day in the park besides making only one trip to KNP during his/her whole life time. An interesting geographical advantage of KNP is that the Brahmaputra river flows over the northern boundary and Karbi Anglong hills are situated near the southern boundary of the park. The Government can use these resources for recreation purposes by undertaking various types of investment programs. If the park authority takes various types of initiatives and introduces new types of recreational activities like angling in the Brahmaputra River, and hiking, rock climbing and mountain biking in the Karbi
Anglong hills, then larger number of tourists would be motivated or induced to spent more than one day in Kaziranga and their expenditure on various amenities would help to boost the local economy as well as the Government. If the local people are engaged in these newly introduced recreational activities, then it would also help in the improvement of the economic conditions of these peoples.

There are four established tea gardens besides the national park. The local inhabitants who are dependent on the tea gardens for their livelihood also have a unique culture. In other words the tea garden workers have a tradition of their own. Few people in the rest of India and the world have the opportunity of visiting tea gardens. Thus a tea garden visit would obviously be a natural attraction for many. If these tea gardens are opened for tourism purposes then it undoubtedly assist in up gradation of the economic status of the local people.

There is thus an urgent need to integrate the wildlife tourism with tea tourism and cultural tourism for the development of socio economic status of the local people. Most of the visitors from far-off places are from the creamy layer and consequently an outdoor eco-friendly game like golf could easily be popularized. So golf courses can also be developed within the periphery of these tea gardens and that would help in promoting golf tourism in Assam.

Inorganic pesticides and fertilizers are rampantly used in these tea gardens, but these types of agricultural practices are not eco-friendly. The use of pesticides and fertilizers in the tea gardens threaten the eco-system of the park (Misra, 2005). Many small
animals, birds and insects of the national park are dying due to the excessive use of pesticides and fertilizers. So the Government should provide various types of initiatives for the use of organic fertilizers and pesticides in these tea gardens for protection and conservation of the eco-system of KNP.

The tourist inflow pressure to KNP from foreign countries and from other states of India except Assam and West Bengal is very low. A very low number of visitors from southern part of Assam take trip to the national park. All these reflect that communication facilities are too poor in Assam. Most of the tourists from far-off places belong to higher income groups compared to the local tourists and so that they can bear a higher amount of travelling expense in making trip to KNP. Generally the local tourists use road and/or rail services and the foreign tourists and the visitors from distant places use air travel services in making trip to KNPs. In southern part of Assam the road and rail communication facilities are too poor, as a result the visitation rate is also small for this zone. The air travel infrastructure is not up to satisfactory levels in Assam. As a result tourists from far off places (availing air travel to come to Guwahati) have to travel around 239 km by road from Guwahati airport to KNP. The nearest airport, i.e., Roroiya airport of Jorhat district is also situated around 110 km away from the park and moreover flights are quite infrequent. Hence the central and state Governments should take various steps for the development of communication facilities in Assam.

The forest guards are not well equipped with arms and ammunition to fight against the poachers and smugglers in the park. They are performing their duties with the help of backdated and obsolete weapons. So to reduce poaching of wild animals in the park,
there is an urgent need for modernization of the forest department especially the security part. The Government should provide modern technologies besides modern arms and ammunition to the servicemen of the forest department in order to make them better equipped for park protection and maintenance.

Data for the last six years on visitors’ inflow to the park reveals that nearly 5 percent of the total tourists are foreigners and sadly it has not grown during this time period. This is mainly because of terrorism and communication problem of Assam. So the Government should take various steps to solve these two problems of Assam.

Generally when tourists make a trip, then they want to buy some indigenous local products or handicrafts as a memento. If the local women are engaged in traditional handicraft making and allied activities through the SHG programmes, a market can develop on the periphery of the park where they can sell these handicrafts at a reasonably higher price to the visitors. This can help in up gradation of economic conditions of these poor local women and this also increases the participation of local women in social and economic activities.

As it is found that existence of one horned Indian rhinoceros have a great influence on the economic value of the park, but poaching of this wild animal is a great problem in KNP. The other wild animals also contribute a large amount to the economic value of the park. In order to protect and conserve these wild animals, the Government should implement new legislations very strictly. KNP is the homeland of one horned Indian rhinoceros and highest number (i.e., 2048 according to census report of KNP, 2009) of
these rhinoceroses are found in KNP. Around 90 percent of total rhino population is found in KNP and Pobitora Wildlife Sanctuary and remaining are found in Orang National Park. But Laokhowa Sanctuary, Manash and Dibru-Saikhowa National Parks are also suitable places for rehabilitation of rhinos because these parks and sanctuaries had a healthy rhino population till the 1980s (Assam Tribune, 22-03-2012). Hence this endangered species should be translocated to these other national parks and sanctuaries of Assam.

Before this translocation an experiment should be carried in the other National parks where this wild animal is to be translocated. This is to observe whether the environment of these parks can be considered as suitable habitats for the growth of rhinos. Moreover the security system in these parks should also be modernized for wildlife protection. This process obviously would help to restore and preserve this wild animal and also increase the tourist inflow pressures in other parks and wildlife sanctuaries of Assam. This process has got momentum under the Indian Rhino Vision 2020 (IRV 2020) and already 22 rhinos from KNP have been translocated to Manas National Park (Assam Tribune, 13-03-2012). On the southern boundary of the park, illegal migrants also create a problem for the park authority. So the Government should undertake proper management policies in this respect also.

Uses of plastic carry bags and other non-biodegradable materials like cans and bottles have been a global environmental concern in the 21st century. So with the objective of preservation of eco-system of KNP the Government should make legislations to restrict the use of these non-biodegradable materials and carry bags or disposables in the
periphery of the national park. Instead of using these non-biodegradable products the Government should provide incentives for the mass use of paper and pottery products especially in hotels or lodges or restaurants around the park, as because these products are biodegradable. Here the advantage is that Assam has a comparative advantage in making pottery products. It also helps in development of the ‘Kumar’ (potters) community who are especially engaged in making these products.

If all the above mentioned suggestions are properly implemented, then the objective of sustainable eco-tourism can be certainly achieved in KNP.

6.3 Conclusions

National parks and wildlife sanctuaries have played an important role that balances the needs for biodiversity conservation against degradation of environmental conditions of different countries while keeping the rapid pace of development. Recently these parks are provided for recreational activities on leisure demands of the people. Due to increased recreational pressure and the consequent damage to the environment, the management of these parks comes under close scrutiny. So, it needs economic valuation. But the task is not straightforward since this kind of public service is not directly sold to visitors for a price. On the other hand, these environmental resources or services are characterized by non-excludability and externality. Due to these characteristics the market system cannot capture all aspects of these resources and these recreational services or biodiversity services are mispriced by the market. Therefore the policy makers should use a new valuation approach to assess the value of these
resources namely non-market valuation methods. Non-market valuation methods provide data and help the policy makers to take decisions on how best to manage the natural resources. Two common approaches to the non-market valuation are Travel Cost Method (TCM) and Contingent Valuation Method (CVM) generally used for assessing economic value of environmental resources. In the present study, both methods are used to estimate recreational value of the Kaziranga National Park (KNP). For this purpose 230 visitors are interviewed randomly using a structured schedule with a single respondent from each group or family chosen in the sample. Using Zonal Travel Cost Method, it is estimated that total consumer surplus is around INR 3.21 million and this surplus indicates the amount that the visitors are willing to pay over their actual cost to participate in the recreational activities of the national park. Average household income of the visitors positively affects the visitation rate (VR) and average travel costs of a particular trip and age negatively affects it.

National parks are established to preserve wildlife or biodiversity. But conservation often displaces local communities and has the potential of raising their distress levels. “Ecotourism” helps in conservation of natural resources or services and raises the standards of living of the local people. But unregulated tourism creates problems in preservation of the wildlife of public parks especially in developing countries. In recent years Kaziranga National Park has faced these problems and the park authority may possibly use revenue maximizing entry fee as an effective instrument. The Kaziranga National Park (KNP) has been suffering from over-exposure in recent years. The tourist inflow pressure is much higher in KNP as compared to the other national parks and
wildlife sanctuaries in Assam. The tourist inflow data of the last two years shows that more than 0.1 million visitors visit KNP per year, but in the other parks and sanctuaries tourists inflow pressure is less than even 0.05 million per annum. In the southern part of the Kaziranga National Park, almost fifty private and public hotels and lodges (there are only four Government lodges) have been constructed providing hospitality services to the visitors. However most of the hotels and lodges are not owned by the local people. The haphazard growth of tourism related infrastructure, especially unchecked expansion of tourism and hospitality industry on the southern boundary of the park, is blocking traditional wild animal corridors. The focus of government and other organizations should remain on the core aspect of establishment of the park (to keep KNP as a safe haven for wild-life) and not on pure commercial aspects like hotel construction to accommodate more tourists. Thus there is an urgent need for a strategic shift of policy on the part of the Tourism and Forest departments so that a segment of the tourist inflow can be diverted towards other parks and sanctuaries to lessen the pressure on KNP. It is found that the park authority can increase the entry fee to INR 187.60 from the current level of entry fee to maximize revenue collection and tourists inflow pressure to the park can be reduced to 0.06 million. By introducing this new level of entry fee the authority can collect INR 24.3 million revenues which are much higher than the current level of revenue collection and this additional amount of revenues can be used for management of the park.

It is found that 84 percent of the total sample visitors willingly want to contribute some amount of money for protection and conservation of KNP. Mean WTP for preservation
of KNP is INR 49.5 and INR 51.97 by using dichotomous type and open ended contingent valuation method and economic value of the park is estimated around INR 5.58 million and INR 5.86 million respectively. Monthly household income, educational level, experience of the trip of the visitors positively affects WTP for protection and conservation of KNP, and age and family size of the tourists negatively affects it. Both the CV methods give similar results regarding WTP estimate, but the estimate of ZTCM is smaller than that of the CVM, because decisions regarding WTP and expenditure for the trip are taken at two different point of time and ZTCM captures only Indirect use value, but CVM captures not only indirect use value but also bequest value. Convergent validity test is carried out to test the reliability of CV estimates.

Poaching of one horned Indian rhinoceros is a great problem in KNP and by using the open ended CVM, it is found that mean WTP for protection of this unique wild animal is around INR 23.69 and the value of the park is reduced by INR 2.67 million if poaching of this wild animal is continuously going on. It is found that around 42 percent of the total sample tourists want to visit the park again. Monthly household income and educational level of the visitors positively affect decision regarding willingness to visit KNP again and age and per capita travel cost of the tourists negatively affect it. Keeping in view the large amount of consumer surplus and recreational or economic value of the park, Government of India and Assam should allocate large budgetary resources for protection or conservation of KNP. So, the Government should develop and implement proper scientific management policy for preservation of the park. It is hoped that this study will pave the way for future research work in the field of valuation of
environmental resources, endangered species or animals and places of historic interest of not only the North East but throughout the rest of India.