

Sustainable Tourism Management in the National Chambal Sanctuary, India: Impediments and Opportunities

Nidhi Yadav, Naresh Chandra Sahu, and Dukhabandhu Sahoo

Abstract—In this study, an attempt has been made to investigate the impediments and opportunities of sustainable tourism management (STM) in National Chambal Sanctuary (NCS) through field survey, focused group discussion, participatory observation, and interview. It is found that NCS is facing severe threats such as environmental degradation, human-wildlife conflicts, illegal felling, and lack of coordination among different stakeholders. One of the major challenges facing the STM in NCS is to create mutually acceptable practices for the tourists and the host community. The other challenges for NCS are now to promote environmentally sustainable tourism, ensuring a better standard of living for the local people. Keeping these challenges and opportunities in view, a framework has been developed to explain the process and implementation of STM in the sanctuary, which would be useful to combat the environmental degradation and to adopt the STM in the NCS.

Index Terms—Host community, national chambal sanctuary, sustainable development, sustainable tourism management, tourism impacts.

I. INTRODUCTION

Over the years, world population is increasing gradually, the demand and exploitation rate of natural resources are also increasing simultaneously, which results in environmental degradation in the form of climate change, pollution, ozone layer depletion, natural hazards, etc. To control this environmental degradation, forest, wetlands, natural recreational sites etc. have been converted into protected areas (PAs) worldwide. In India PAs are regulated under Wildlife Protection Act (WPA), 1972. NCS, one of the most endemic wildlife sanctuaries in India, has been selected for the study, which is located in three states of India. It is a unique place (tri-state sanctuary) in South Asia, where one can come across different endangered species like Indian skimmer, dolphin, rare species of turtles, crocodiles, gharial, migratory birds etc. To protect the sanctuary, local people have been displaced from the area. They are not allowed to access the NCS for sand mining, fishing, agriculture, and for their basic needs, etc. However, environmental conservation is the most important phenomena, which is being emphasized without the rehabilitation and resettlement (R&R) policy in the NCS region. It is required to consider local people's livelihood issues while conserving PAs. Therefore, emphasis needs to make on the promotion of environmentally

sustainable tourism to ensure a better standard of living of the local people. The promotion of tourism sector will provide employment opportunities for local people. In addition, it will be helpful to spread environmental conservation related awareness.

The major objective of this study is to find out the impediments and opportunities to adopt STM in NCS by adapting field survey, focused group discussion, participatory observation, and interview methods. One of the major challenges for the implementation of STM in NCS is to create a profitable and environmentally sustainable tourism sector while concurrently acquiring a pleasant practice for tourists and sustaining the standard of living of the local people.

II. STUDY AREA

NCS, a Chambal river based sanctuary, is spread over ten districts of three states of India i.e. Etawah and Agra of Uttar Pradesh (UP), Bhind, Sheopur and Morena of Madhya Pradesh (MP), and Kota, Bundi, Karauli, Dhaulpur and Sawai Madhopur of Rajasthan (Fig. 1).

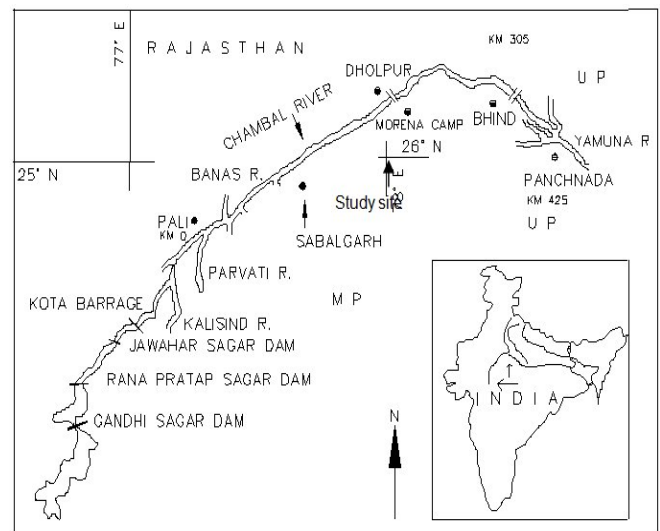


Fig. 1. Geographical location of NCS in India.

The NCS lies from 24°55' and 26°50' N to 75°34' and 79°18' E. It emerges from the Vindhya hill range of MP, flows in Rajasthan and merges in the Yamuna River, where five rivers meet called Pachnada in UP [1].

Therefore, it becomes a fraction of the larger Gangetic drainage formation [2]. A 600 kilometer extended area of this river, between Jawahar Sagar Dam in Rajasthan and Pachnada in UP, has been confined as the NCS, where the river is approximately 400 meter widespread and 26 meter deep [1]. NCS is called tri-state sanctuary due to its diverse area in three states. The geographical detail of the sanctuary

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has been shown noticeably in the above figure (see Fig. 1). The present stakeholders, who take part in the NCS function system, are given below in Fig. 2, how the different stakeholders in surrounding area of sanctuary influence each other.

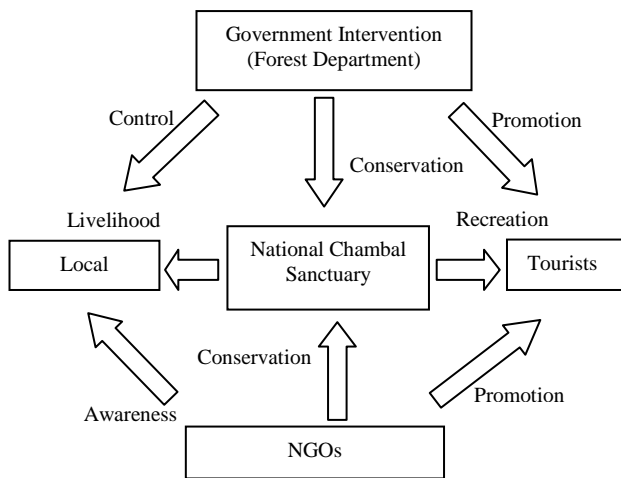


Fig. 2. Representative framework of NCS function system.

Before the sanctuary was officially declared, the Chambal River was a natural source of livelihood for surrounding people. Local people used to depend on NCS for drinking water, sand mining, fishing, grazing, farming, vegetables, food, fuel woods, non-timber forest products (NTFPs) etc. All these activities are harmful to the endangered species of the river. Therefore, after the conversion of the river in the sanctuary, all these activities have been banned and controlled. It has been found that due to lack of proper management and insufficient control of forest departments, these activities are still taking place in different parts of NCS. However, non-governmental organizations (NGOs) also play very important role in the protection of the NCS and spreading awareness about wildlife conservation among local people. It has been shown in the (Fig. 2) that forest department controls the local people from exploiting the sanctuary area, but NGOs are trying to make the local people aware through different environmental awareness programs. Hence, it is suggested that forest department should also make the local people aware of environmental conservation through collaboration with NGOs and local people participation.

The main problem in NCS has been found that the most local people have lost their livelihood after the establishment of the sanctuary. Later on, after the proper development of the sanctuary, the site has become a nature based tourist destination. With the development of NCS as a natural site, another kind of demand emerged from the sanctuary for a recreational purpose, which is promoted by both forest departments of respective three states and NGOs. But, if the number of tourists increases without a proper understanding of carrying capacity, it will have a negative impact on the sustainability of the sanctuary. Hence, it has become a challenge, how to manage sustainable tourism without hampering the quality of sanctuary as well as wildlife. After merging both kinds of demand: livelihood and recreational

purpose, there should be a goal to conserve the wildlife with active involvement of local people. With this responsible participation, local people will become environment-friendly and will help in wildlife conservation. Later, the interaction of tourists with local people will develop the site with merging the cultures of surrounding regions. Generated revenue from the tourism sector may be used for the host community development and sanctuary management. The effective interaction among various stakeholders would be helpful to ensure STM in NCS. The sustainability of wildlife depends on the protection of PAs as well as on the sustainable use of the natural resources by villagers and native people [3], [4].

III. IMPEDIMENTS TO ADOPT STM

In spite of dispersion in ten districts of the NCS, tourism is being operated only in three districts i.e. Morena of MP, Agra of UP and Sawai Madhopur of Rajasthan. In Rajasthan, tourism has been started recently during 2014-2015, that is not yet fully developed. To understand the relationship between local people and managers of the sanctuary, focused group discussion has been carried out with the help of forest department officials, NGOs, and village heads. Some impediments have been identified during the survey to adopt STM in NCS. These are as follows:

- Lack of government incentives for the displaced people such as rehabilitation and resettlement (R&R) policy;
- Increasing pressure by local people on sanctuary due to lack of livelihood support;
- Lack of livelihood support system leads human interferences to the river ecosystem which results in illegal fishing, sand mining, and poaching;
- Lack of awareness among the local people about the importance and significance of environmental conservation.
- Lack of basic facilities such as drinking water, infrastructure, schools, hospitals, security and sanitation to the displaced people in the villages , nearby NCS area;
- Lack of coordination among NGOs, local people, and forest departments personnel;
- Less number of tourist inflow to the sanctuary due to lack of proper infrastructure such as road and railway;
- Insufficient staff for ensuring effective and proper tourism management;
- Frequent human-wildlife conflict causing loss of valuable resources; and
- Undervaluation of ecological services.

The above-mentioned impediments are considered as the major hurdles in NCS tourism development and management. Therefore, it is essential to resolve the impediments by successfully adopting STM. The following challenges are faced by the managers of NCS to implement STM framework.

- How to adopt STM framework;
- How to create scope for local people's participation in the management, tourism development, protection and wildlife management;

- How to enhance the tourists' inflow to NCS for maximizing revenue for its day to day activities;
- How to create more employment opportunities for local people to reduce pressure on NCS;
- How to check all illegal activities taking place in NCS;
- How to reduce poverty of local people residing in and around NCS;
- How to make local community more aware of the benefits of conservation and sustainable management of NCS; and
- How to maintain the positive relationship among the economic, social, environmental, cultural, and political aspects of NCS sustainable tourism development.

IV. STM AND ITS SCOPE

The concept of sustainable tourism has gained momentum after a worldwide debate on sustainable development in the late 1980s. The concept of sustainability clearly includes the environment, people and economic systems [5]. The development, which meets the requirements of the present without compromising the capability of future generations to meet their own requirements, is called sustainable development (SD) [6]. SD concept has been used to focus on the development with sustainability and availability of natural resources for future generation. However, tourism, a profitable activity has an unavoidable impact on the natural resources and natural climate system. Swarbrooke (1999) defines that the term tourism has its own step by step evolution, which can be described as chronologically, this is briefly depicted in (Fig. 3) [5]. Initially, mass tourism has been started since the 1960s. Later on, the negative impacts of tourism have been realized on the ecosystem [7]-[10].

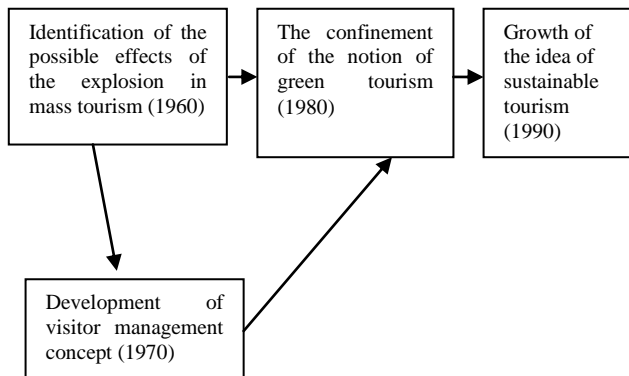


Fig. 3. Sequential improvement of the perception of sustainable tourism.

The term "Ecotourism" was introduced in 1965 when environmental issues were first incorporated in the tourism sector. Earlier, it was related only to visitors but later it was considered to support the local people and PAs by providing the potential for economic benefits. Ecotourism is frequently observed as a type of environment based tourism that has been developed into a significant choice of visitors. It is defined as "tourism that allows for the enjoyment and understanding of the nature and culture of a destination while producing economic benefits and actively promoting environmental conservation" [11]. To reduce the negative effect of tourism on the natural areas or tourist destination, visitor management concept has emerged in the 1970s.

Visitor management plays a vital role in shielding the environmental sustainability of protected areas, providing funding, occupational opportunities and empowering visitors or tourists to achieve valuable practices from their visit to recreational sites. Visitor management can be attained in two foremost behaviors: first by a recreational site agency managing destinations (e.g. parks and their sites) and second by directly managing visitors or tourists (e.g. through user fees). It can be indirectly attained by a park agency working with the tourism industry to both shields the park and provide quality experiences for visitors, along with creating revenue for the park maintenance [12]. The green tourism has been started since the 1980s, which reduces the environmental costs and maximizing the environmental remuneration of tourism. At the end of the 1980s and in the course of 1990s, the idea of soft tourism was increasingly replaced by deliberations of sustainable tourism. But, in sustainable tourism, the emphasis has been given to incorporating the environmental quality and the host community involvement. Sustainable tourism has to meet social, cultural, environmental and economic needs. It has a continuing vision, for present and future both generations. It should be economically reasonable, culturally adapted, ecologically viable and productive as well. The rapid escalation in tourism has created many troubles, for instance, the loss of traditional lifestyle, pollution, and cultural loss etc. In a study, Murphy has discussed the relationship between tourism and the host community, where tourism is considered as socio-cultural event for both tourism and host [13].

An increased number of visitors and their actions bring many changes in the environment and host community. Therefore, the local visitor growth can lose its moral fiber. In order to make certain the reimbursement of tourism on the local people, the social indicators, evaluate how tourism projects could be incorporated into the local people's lifestyle [14]. Tourism stress, community health, social collision, security, and local people pleasure are different forms of social indicators. Economic indicators assess the association between tourism projects, economic and sustainable development. It would comprise of investigation of management over development, the industry produced tax returns, foreign exchange income or losses, and the share of local tenure [14]. The host community's involvement with tourism may bring the sustainable tourism practices. STM is framed with three words: sustainable, tourism and management. Sustainable means which can be sustained for a long time or for a future generation without over exploiting rate of resources in the present generation. Tourism means to travel from one place to another place for the purpose of recreation, business, leisure, knowledge, nature, awareness or to visit a different environment. Management means the process of dealing with or controlling things or people in the proper way so that all should be benefitted without any negative impact. In simple words, the tourism which can be sustained and managed in the present without compromising the availability, quality, quantity of natural resources and environment for future, is known as sustainable tourism management (STM). "Sustainable tourism is defined as leading to management of all resources in such a way so that the economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological

processes, biological diversity and life support systems" [15]. There is a big gap between policy making and implementation despite the recognition of sustainable tourism as a viable option for more voracious development models. Disagreement among management authorities, investors, tourists' developers and the host communities results in the unsuccessful policy execution [16], [17]. Further, Pigram (1990) states "Sustainable tourism has the potential to become a tangible expression of sustainable tourism development. Yet, it runs the risk of remaining irrelevant and inert as a feasible policy option for the real world of tourism development, without the development of effective means of translating the idea into action" [17].

In the context of NCS, STM is required to bring proper protection of wildlife, development of sustainable tourism and ecosystem management in the sanctuary. After becoming a PA, NCS has become a unique place for the tourism purpose, which can serve a better place for tourism destination as well as the source of livelihood by the active involvement of the local people in tourism activities. There are four entry points in UP part of sanctuary, but only one is opened in Agra. Similarly, there is a huge scope of tourism development in different parts of NCS among three states, where tourism sector is not yet developed apart from Morena in MP and Sawai Madhopur in Rajasthan.

V. DEVELOPING A FRAMEWORK FOR STM WITH THE POSSIBLE OPPORTUNITIES

STM is a socioeconomic issue because it is based on the distribution of resources in the current and future generation. It has been found that while applying tourism in NCS, some people gain and some people lose. To resolve the problem of unequal distribution should be the main motivation for implementing the STM framework in the sanctuary. Tourism and environment are inextricably linked and interdependent [5]. Due to tourism, the environment can be negatively affected. But with better knowledge of the industry and tourists, the adverse effect of tourism can be reduced. The lower part of NCS has more spots of wildlife attractions than a sanctuary such as Lion Safari and Sarsai Nawar wetland in Etawah district of UP. Government and forest department need to focus on boosting eco-tourism around such spots with the conservation angle attached to it. Panchnada is a convergence of five rivers: Chambal, Kunwari, Yamuna, Pahuj, and Sind. It is a rich habitat for dolphins. Towards the north of Etawah, Kachauraghat on the Yamuna is an important bird area. Sarsai Nawar, a bird sanctuary with a lot of sarus cranes, and other migratory birds, could be added attraction for the visitors of NCS. There is a need to supplement the spots by means of transport and public facilities [18]. It shows a wide-ranging sight of peaceful natural magnificence during the raining and winter season. However, it becomes a scorched expanse during the summer season. To attain the STM, there is a need to control environmental degradation with minimizing environmental cost, which will be able to maximize the economic benefits while ensuring environmental conservation. Further, it is required to define the carrying capacity and fixing the fair pricing on tourism, which will help to control the overexploitation of natural resources in the forestry area. The

process of STM could be explained by the following aspects given below in Fig. 4. However, the STM should be socially equitable, environmentally bearable, economically viable and culturally manageable.

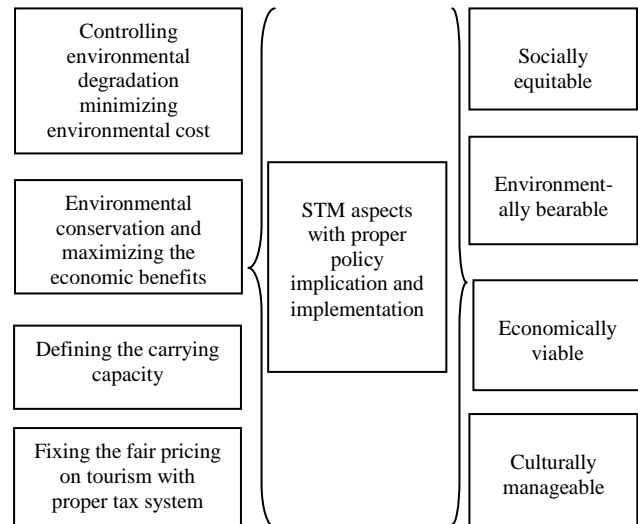


Fig. 4. Process of STM in the NCS.

To control negative side effects of increasing tourism upon different stakeholders, there is a need to fix fair pricing on tourism with the proper tax system. A framework of STM can be framed with the proper policy implication and implementation of the above aspects. However, in the sanctuary, boating is the center point of attraction for more tourists, which may have a negative impact on aquatic wildlife in terms of noise pollution, air pollution and water pollution. The above ground particulars during the building construction, oil spills, and uncurled work activities will be harmful to their natural habitat. Tourists activities may have significant negative impact on the surrounded environment in terms of using detergents in hotels, untreated wastewater contaminates in terms of water pollution. During safaris, tourists may create a disturbance in wildlife of forests. Further, they influence the perceptive ecology and environment.

SD concept should be implemented in ecosystem management and sustainable tourism in NCS. To achieve the STM in practice, there is a need for the coordination among different stakeholders such as the local community, NGOs, forest department officials, tour operators, and hoteliers. There are certain tourism impacts on society, environment and economy. It is inevitable that increasing tourism can have a negative impact on the atmosphere. To control the harmful side effects of tourism in different sectors, there is a need to follow STM framework properly in the sanctuary. To adopt STM in NCS successfully, there is a need to promote and develop railway station, city buses, ecotourism information center as in Sawai Madhopur railway station in Rajasthan. In addition, there should be development of infrastructure, hotels, roads and other basic facilities to support tourists and staff management. Therefore, through proper management of tourism in a sustainable manner, it is required to control and reduce adverse side effects of tourism and to enhance positive impacts. By applying the carrying capacity in the tourism, it would be easier to fix the fair price and tax on tourists. Income generated from tourism could be redistributed for the

development of the local community. A graphic detail of the proposed STM is given below in the Fig. 5.

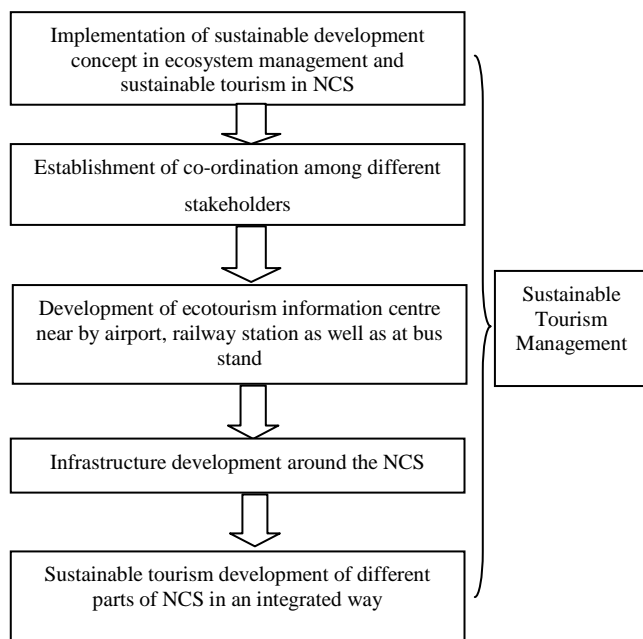


Fig. 5. STM framework in NCS.

In this way, sustainable tourism development and management can be achieved in different parts of NCS. Further, it would be useful to check all illegal activities like fishing, poaching, and sand mining, which are taking place due to lack of staff, fund and tourism in the sanctuary area. Likewise, STM framework should be socially, economically, environmentally, and politically sustainable by taking into consideration the culture of the host community. To control the air, noise pollution and privatization in the tourism area, public transport should be encouraged. There is an urgent need to use the technological innovation to reduce the pollution and make the system green. For example, Annapurna 'Unnatt' Chulha has been developed by "The Energy and Resource Institute" (TERI), New Delhi that can be operated with less amount of fuel without much pollution. The use of solar energy and CNG gas will be helpful to reduce the air pollution in the PA region.

Since NCS is a kind of wetland that supports not only local people and aquatic wildlife but also provides recreational benefits to tourists. Wetlands create benefits to tourists directly by providing recreational services and indirectly by supporting other coastal ecosystems and managing the climate system [14]. It has been found that the land's rights in PAs are still with local people, but the supervision is mainly carried out by forest departments or NGOs. There are many local people residing in surrounding of NCS, who have been displaced due to the establishment of the sanctuary. With the development of tourism sector, they could be able to get employment opportunities in the tourism sector as well as in other related services. This tourism sector can create the new environment-friendly societies and the new businesses.

To control the negative impact on the environment of tourism, forest departments need to follow sustainable environmental conservation policies with proper regulation taking into account both positive and negative externality effects. The tribulations of littering and inappropriate solid waste management besides construction waste need to keep

control while using environmentally friendly techniques to save the quality of the destination and the biodiversity [19]. It is the most important thing in STM that the private sector, such as resorts or NGOs should not follow commercialization or commoditization under the shadow of environmental conservation. Forest department should define the NCS's carrying capacity to sustain its resources and originality. It has to adopt proper environmental management policy in the development of sustainable tourism while determining the number of tourists. The promotion of tourism should not go beyond the carrying capacity.

The tourism sector has economic impacts on principal stakeholders comprising of forest departments, NGOs, developers (investors), hoteliers, tour operators, tourists and the local people. Currently, government officials of NCS are facing a lot of problems in the NCS area, which include insufficient funding, shortage of staffs, fewer resources, and lack of coordination with local people and NGOs. These are considered as impediments in environmental conservation. In addition, the environmental conservation without any incentive or awareness in local people is an only a half road map. Therefore, a sustainable tourism development should be dealt with the government incentives and policy implications. The forest department officials face the problems of red-tapism in implementing many innovative policies in implementing sustainable development policies of the area. The main challenge in the surrounding area is how to generate jobs for the rapidly increasing population. The government has to adopt the sustainable development concept in case of tourism management in the NCS. It would be helpful to develop the surrounding area and to create positive economic impacts in the surrounding area.

In the NCS area, NGOs are working for wildlife conservation, but only few of them are functioning well. In a discussion with forest department officials, it has been observed that media is playing a negative role in highlighting the conflicts between human and wildlife in the sanctuary over the years that is not a healthy environment to implement STM in NCS. To reduce the negative endorsement by media about NCS, the government has to take each stakeholder on board while framing sustainable conservation policies. The government has to come out with proper implementation of policies with sufficient fund and staffs.

VI. CONCLUSIONS AND POLICY IMPLICATIONS

In conclusion, it is suggested that green awareness efforts must be promoted among local communities with the intention to protect and develop environmental resources. The government should encourage various stakeholders of NCS to take part in the management and protection of rich biodiversity and resources of the sanctuary. The forest departments and policy makers should play a significant role in adopting and implementing ecologically sound policies and programs to circumvent the degradation of the NCS environment and to achieve the STM. For implementing STM successfully in NCS, it is suggested that all forest departments of three states should come up with a centralized management plan and framework taking into account the diverse interests of the various groups associated with the sanctuary. The management of NCS should be formulated

with employment generating programs such as establishing small scale cottage industry, agroforest handicraft, plantation and promoting self-help groups (SHGs) and joint forest management (JFM) to ensure the local peoples' participation in the protection of sanctuary for the promotion of sustainable tourism. Overall, the government has to formulate and implement effective policies to resolve the management issues among different stakeholders and to adopt STM in NCS. Sustainable development concept should be implemented along with STM while achieving the wildlife conservation in the sanctuary for the betterment of present and future generation.

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