

ECOTOURISM DEVELOPMENT SOLUTIONS IN BAC LIEU BIRD SANCTUARY NATURE RESERVE, BAC LIEU PROVINCE

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ABSTRACT

Bac Lieu bird sanctuary is a species and habitat conservation area under the current classification of the Ministry of Agriculture and Rural development (MARD). There are many potential and opportunities for ecotourism development due to its rich biodiversity, many plant communities and wild birds with large numbers of individuals. These wild birds concentrate on here for residence, nesting and breeding. However, the exploitation of tourism is not proportional with the existing potential, mainly spontaneous. On the basis of the literature related to the Bac Lieu bird sanctuary published, the author's practical experiences, the paper focuses on prospects assessment and propose some solutions to sustainable ecotourism development in the Natural Reserve (NR) Bac Lieu.

Keywords: Bac Lieu bird sanctuary, ecotourism, Bac Lieu tourism.

TÓM TẮT

Giải pháp phát triển du lịch sinh thái tại Khu bảo tồn thiên nhiên vườn chim Bạc Liêu, tỉnh Bạc Liêu

Khu bảo tồn thiên nhiên (KBTTN) vườn chim Bạc Liêu thuộc tỉnh Bạc Liêu, là loại khu bảo tồn loài và sinh cảnh theo phân loại hiện hành của Bộ Nông nghiệp và Phát triển nông thôn. Nơi đây có nhiều tiềm năng và cơ hội để phát triển du lịch sinh thái (DLST) do tính đa dạng sinh học phong phú, có nhiều quần xã thực vật và nhiều loài chim hoang dã với số lượng cá thể rất lớn tập trung về đây cư trú, làm tổ và sinh sản. Tuy nhiên việc khai thác du lịch tại đây vẫn chưa tương xứng với tiềm năng hiện có, chủ yếu mang tính tự phát. Trên cơ sở các tư liệu liên quan đến vườn chim Bạc Liêu đã công bố, kinh nghiệm thực tế của nhóm tác giả, bài viết tập trung đánh giá tiềm năng và đề xuất một số giải pháp phát triển DLST bền vững tại KBTTN vườn chim Bạc Liêu.

Từ khóa: vườn chim Bạc Liêu, du lịch sinh thái, du lịch Bạc Liêu.

1. Introduction

In recent years, ecotourism has been growing rapidly in many countries in the world and is increasingly attracting the attention of the broad social strata,

especially for those travelers wishing to visit tourism and leisure. In addition to contributing significant nature conservation, protecting of biodiversity and cultural communities, ecotourism

development has brought enormous economic resources, creating additional employment opportunities and raising national income for the community as well as local people, especially people in remote areas - where there is the Nature Reserve and the attractive landscape. Along with the development of the world and the whole country, ecotourism in Bac Lieu also has its own changes with the strengths of ecotourism, sea tourism because of its rich and unique natural tourism and human resources.

Bac Lieu bird sanctuary belongs to the Natural Reserves-NR (Species and Habitat Conservation Area). It has the potential and opportunity to develop ecotourism due to the abundant biodiversity, many plant communities and many wild birds. However, the exploitation of tourism here is not proportional with the existing potential, mainly spontaneous and unplanned.

Therefore, it is necessary to have many specific strategies in tourism resource planning and evaluation as well as suitable solutions for the NR in particular and Bac Lieu tourism in general to develop ecotourism in Bac Lieu bird sanctuary towards sustainability.

2. Research methodology

Data and information on biodiversity as well as the current state of development of ecotourism in Bac Lieu bird sanctuary NR is an important factor to be able to assess the specific development of tourism, from which solutions and strategies proper development. For a comprehensive view of the development of tourism in Bac

Lieu bird sanctuary NR, the authors have used the primary data provided by the management board of Bac Lieu bird sanctuary NR from 2009 to 2014. In addition, secondary data from research work of scientists, departments, helped to authors make analysis more precise and specific about the potential and strategies and develop ecotourism in Bac Lieu bird sanctuary NR towards sustainability.

In order to accurately assess the development of sustainable ecotourism in Bac Lieu bird sanctuary NR, the authors have used a number of methods such as:

- + Methods of collecting and processing information, analysis, synthesis, comparison to clarify research problems in a scientific way and in more detail.

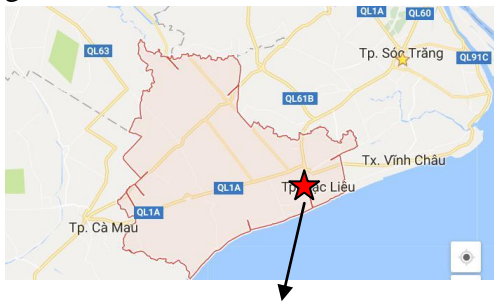
- + In addition, the authors also use SWOT analysis method to make solutions for ecotourism development towards sustainable ecology, science based on the analysis of Strengths (S), Weakness (W), Opportunities (O), Threats (T) and the strategic development of S/ O, W / O, S / T, W / T.

3. Results and Discussions

3.1. An overview of the nature conservation area of Bac Lieu bird sanctuary

According to historical documents, the Bac Lieu bird sanctuary has existed for more than a century ago. It features mangrove ecosystems typical of the Mekong Delta remains due to process of sedimentation in the South China Sea. Resources of Bac Lieu bird sanctuary is very diverse and rich, with many plant communities and natural conditions that are suitable for many animals, wild birds.

It concentrate here for resident, nesting and multiplying the species composition with huge number of individuals.



Picture 1. Location of Bird sanctuary

In 1986, the Bac Lieu bird sanctuary are included in the list of protected areas of Vietnam according to Decision No. 194 / CT-HĐBT August 9, 1986 Chairman of the Council of Ministers.

October 30, 2014, the Prime Minister signed Decision No. 1976 / QĐ-TTg approving the planning of forest systems, special use nationwide by 2020, with a vision to 2030. Of which, Bac Lieu bird sanctuary is included in the list of NRs [9].

- **Ecotourism natural resources:** NR Bac Lieu bird sanctuary is blessed gift of tourism resources with the natural diversity of species, unique, particularly with many species listed in the Red Book.



Picture 2. Bạc Liêu Bird Sanctuary

- **Plants:** Bac Lieu Bird sanctuary Management Board has a list includes 194 species including wild species, planted and

brought from other places. If only natural wild species are counted, there are the total of 152 species of vascular plants belonging to 127 Genus of 55 Families under 2 Phyla [6].

Flora in Bac Lieu bird sanctuary showed that at least 57 valued plants, of which 22 species have medicinal values, 11 species of food and 7 species of doing scene [11].

With additional investigation results, the list of plants and vegetation of Bac Lieu bird sanctuary NR show:



Picture 3. Birds nest on the Palm tree

- + Plant species composition of Bac Lieu bird sanctuary NR is in average level in comparison with Special-Use forests of the Vietnam Southwest region with true mangrove species, participation-mangrove trees and terrestrial species.

- + It have a characteristic of natural forests with Cha la, Coc, Tra, Gia, Mam ... It is the role of habitat essential to the life and habitat of nesting, reproduction of wild birds. Cha la is adaptive for stork (Co), heron (Diec) nesting and reproducing. Tra bo de (Bodhi trees) and Tra lam vo are adaptive for Gray heron (Diec xam), Bird of prey (Dien dien). Gia, Coc are adaptive for fire herons (Diec lua) residence and nesting in the breeding season.

- **Animals:** The study results in Bac Lieu Bird sanctuary NR were listed with 250 species of wild animals under 116 Families, 37 Orders [2].

Table 1: Number of animals in the class of Bac Lieu Bird sanctuary Nature Reserve

Class	Number of Order	Number of Family	Number of Species
Mammals	5	10	16
Birds	12	39	109
Reptile	2	11	21
Amphibian	1	5	8
Fish	17	51	96
Total	37	116	250

(Source: [2])

In the forest animals in Bac Lieu Bird sanctuary Nature Reserve, there are many species of national and international conservation, such as:

+ *Class of Mammals*: Smooth otter (Rái cá lông mượt), lynx (Mèo rừng) and otter fur cape (Rái cá lông mũi).

+ *Class of Birds*: Indian Co Lao (cò lạo Ấn Độ), Black-headed ibis (cò quăm đầu đen), Indians Indians (điêng điếng), spot-billed pelican (bồ nông chân xám), Bangkok Empire (cốc đế).

+ *Class of Reptile*: Gecko, Cobra, Pythons, Snake stripes melon (rắn sọc dưa), Drain snakes (rắn ráo), Turtles.

+ *Class of Fish*: Big Porridge, Porridge sea fish, Sardines toothless, Milk Shoots Fish, Fish Huong oblique stripes (cá hường sọc xiên), Archerfish (cá mang rỏ).

The abundance and diversity of wildlife in Bac Lieu Bird sanctuary NR is the basis for the implementation of in-situ conservation of forest animals in natural habitats and implementation of research projects on species, environment live, food sources, the relationship between animal chain - plants, animals - animals and the relationship between people and

conservation.

- *Ecotourism cultural resources*: Within the bird sanctuary, the district Bac Lieu Town Base has operated 1960 - 1975. Due to the request of leaders of the revolutionary movement in Bac Lieu city, since 1960, the bird sanctuary area was chosen as the revolutionary base of the town.

The Bac Lieu bird sanctuary revolutionary base continued to exist and promoted the effectiveness of the leadership of the revolutionary movement, combining with the enemy throughout the remaining years of the American war, contributing to the overall success of liberation of Bac Lieu in particular, the South of Vietnam in general, in unifying the country [1].

The natural and cultural resources mentioned above are important factors for the development of ecotourism in Bac Lieu Bird sanctuary NR. Especially today, when the environment heavily contaminated, high life pressures, the people tend to join the nature and traditional culture and ecotourism become mainstream in the development of tourism in the world. With

the inherent potential highlights, Bac Lieu Bird sanctuary NR in the future will be an attractive destination for tourists.

3.2. Prospects for ecotourism development in Bac Lieu bird sanctuary

3.2.1. Development of some tourism forms

With the advantage of availability of diverse tourism resources, Bac Lieu Bird Sanctuary NR is currently developing a number of tourism forms with plentiful contents:

- *Convalesce*: The quiet, clean air, mild local people, hospitable, more local produce (rice, shrimp, fish, fruit, cattle, poultry ...) provided spot for tourists. Bac Lieu Bird sanctuary Nature Reserve has great potential to build a resort, with holiday cottages along the forest, close to nature, environmentally friendly.

- *Discover nature*: Discover the forest Hau - typical forest remaining probability, visit the bird sanctuary, the route through the forest,...

- *Entertainment*: Fishing, bird watching, canoeing under the canal.

- *Scientific research*: For scientists, students - students passionate about the study of wetlands, the forest succession process probability, fisheries, wildlife and management methods, water control forest fire.

3.2.2. Development of tourist routes

Bac Lieu Bird sanctuary NR has become one of the attractions, a large amount of tourists to visit in the province of Bac Lieu. Currently, there are two types of travel routes being exploited in the NR including online and offline travel links.

- *The internal routes*: Due to the small size of NR, the internal route construction of ecotourism is also limited. Some typical ecotourism route is included:

- *Route 1 (take electrical car, bicycle)*: The administrative area - visit the forest ecosystem, to the point of observation of wild bird populations (around embankments bird sanctuary).

- *Line 2 (walking)*: Administrative area - visit the plant communities, nesting, and feeding grounds of residence of the birds - the historic district Party Committee of Bac Lieu bases.

- *Route 3 (canoe)*: Administrative Region - galleries biodiversity- swimming canoe through the canals to visit the ird sanctuary.

- *Route 4 (at administrative area)*: Watch documentaries on biodiversity NR Bac Lieu Bird Sanctuary and the conservation program - see the exhibited specimens biodiversity - directly visit the animals, the birds in the taming area - recreational activities (fishing, eating uong - exchanges, amateur singing).

- The link travel routes

+ ***Route ecotourism in the Bac Lieu city***:

- *Route 1*: The Prince of Bac Lieu - Phuoc Duc Ancient Temple - Thap Vinh Hung - Siamese temple Personnel - Bac Lieu Bird Sanctuary - Bac Lieu Sea - Tu Bac Lieu property.

- *Route 2*: Cao Van Lau - Bac Lieu Bird Sanctuary - Giong Label - The Buddha Bar sound stations - resort Nha Mat - Siamese temple Personnel - Wind power plants - Whale mausoleum.

+ *Ecotourism inter-district route*

- *Route 1*: Buddha Guanyin station

area - Bac Lieu Bird Sanctuary - relic Noc Nang (Gia Rai) - Ganh trench (Gia Rai).

- *Route 2:* Garden Birds - Hunan ecotourism zone - Bac Lieu salt area - Temple President Ho Chi Minh (Vinh Loi district).

+ ***Ecotourism inter-city route***

- *Route 1:* Sai Gon - Soc Trang - Bac Lieu and Ca Mau.

- *Route 2:* Chau Doc - Tra Su Melaleuca Forest - Ha Tien - Bac Lieu - Ca Mau.

Guests can choose from the tourist routes in line with the time and purpose to explore the Bac Lieu Bird Sanctuary - Featured attractive ecotourism point of Bac Lieu Province.

3.2.3. Exploitation of infrastructure facilities in tourism

- ***Roads:*** There are now concrete road and public transport serving local employees as well as visitors from the city center, adjacent districts to the Nature Reserve. However, public transportation only goes to the Bird Sanctuary bridge because the entrance can't withstand large vehicles (vehicles > 16 seats). Therefore, the need to upgrade and expand the roads in the reserve.

- ***Power Systems:*** Power is used from the national grid line, serving for lighting purposes, activities, use of machinery,... and connect the communication with the outside.

- ***Water supply system:*** Water for tourism activities are taken from underground water and surface water in the canals and regulated lakes in the area.

Groundwater sources used for drinking by employees and visitors,

sanitation works, irrigation, cooking. Surface water used for water retention function forest fire in the dry season, moisturize the area, where the feeding of birds diving and water canals cleaned. Currently, the waste water is discharged untreated directly into the canals of NR causing aesthetic loss and environmental pollution.

- ***Facilities - techniques for tourism:***

With a total area of 126,7 hectares, the bird sanctuary is divided into 4 compartments A, B, C, D (GTZ 2010). In particular, the infrastructure for tourism development is located in the 3 compartments A, B, C.

- The infrastructure for tourism development in the strict protection zone: Including parcels located in Lot A and B (strictly protected zone) with a total area of 68,6 hectares:

- Relic bases Bac Lieu town area of about 500m² is made of concrete.

- The bird observation tower located in ecological restoration zones, adjacent to the strictly protected zone.

- The infrastructure for tourism development in the ecological restoration zones: Encompassing the entire Compartment C (ecological restoration zones) with an area of approximately 30 hectares. Space tourism development is the entire subdivision with the observation tower and bird stopover, expect the entire scene hut made of wood and other materials as environmentally friendly water coconut leaves. However, this works is often faster degradation.

- The infrastructure for tourism development in the administrative subdivision services: Administrative subdivisions planned service area of 6.7

hectares are included, located in the current administrative area and extended in Compartment C. Regional focus primarily works: gates, office of Bac Lieu Bird Sanctuary Management Board, exhibitors biodiversity, the pavilions, wooden bridge moves through the canals, watching ladders, monkey breeding barn - birds, birds in a greenhouse park, cafeteria for guests, toilets, parking.

Beside the facilities and infrastructure mentioned above, there are other projects such as internal concrete road, greenpark, house, canteen, sports facilities for employees.

Many of the tourism facilities in the Nature Reserve have been degraded, temporary exhibits are out of operation, foot rests, and bridge bridges are badly damaged, potentially endangering visitors.

Currently, the Management Board of Bird Sanctuary is investing in building and upgrading of infrastructure to better serve tourism with the following items:

- Construction of the embankment roads surrounding envelope Bird Sanctuary (4.600 meters long).
- Construction of the main road segments connected to the highway from the Bird Sanctuary at the end of the west gate NR Bird Sanctuary (1.200 meters).
- Planting flowers in the administrative subdivision services.
- Investment in dredging the canals in NR.

3.3. Scientific basis to propose the sustainable development of ecotourism activities in Bac Lieu Bird Sanctuary Nature Reserve

3.3.1. The strengths, weaknesses,

opportunities and adversely affect the development of ecotourism in Bac Lieu Bird Sanctuary Nature Reserve

• Strengths

NR has a high biodiversity Bird Sanctuary with rich flora and fauna. Including many species of birds in the Red Data Book of Vietnam and the world.

- The natural environment is not polluted, and pristine nature, stable natural climate conditions, natural disasters less likely to occur.

- There remains a bold resistance base in western culture, there are many traditional art forms.

- The staff and employees are enthusiastic, responsible and work for years, sticking to the reserve.

- Local communities actively involved in conservation and communities desired to engage in tourism development activities.

- Nature Reserve is located near route and share with other tourist destinations in the province, convenient transportation.

- Use eco-friendly materials in the construction field.

- The protection and conservation attention.

- There is strategic project development planning ecotourism.

• Weakness

- No planning activities and specific tours, budget development and conservation investment is limited.

- The facilities are insufficient, failing to meet the needs of tourism development, especially staying system and auxiliary services.

- Infrastructure for tourism

degradation, need to upgrade, repair. Progress of implementation of ecotourism projects has been slow.

- No departments specializing in developing ecotourism activities, lack of human resources, lacking qualifications, no experience in management, business organization, ecotourism operators.

- Active search for markets, promoting the image, tourism products and the link with the travel companies have not been promoted.

- Not yet fully exploited the potential availability of NR, have not made full use of the reserve area. Tourist services not rich: products, types of tourism, services not diversified, no souvenirs.

- Recognizing the importance of conservation and community participation in ecotourism activities are limited.

- NR locates in Bac Lieu province, far from cities and major tourist centers. So the shuttle tourists, perform the travel operations difficult.

- **Opportunities**

- The needs of people looking for environmental, nature.

- Location importance of ecotourism in the world and in Vietnam.

- The situation of rising prices, many foreign tourists choose Vietnam as the preferred destination.

- Bac Lieu economy thrives; there are many mechanisms and policies on investment, especially tourism development priorities, natural resource conservation.

- The domestic and foreign organizations implementing projects for sustainable ecotourism development and environmental protection, biodiversity.

- Human resources tourism is growing in quantity and quality due to the system of universities, colleges and training each year.

- There are many opportunities to learn from the experiences of other NRs and national Parks.

- Social development with the explosion of information technology and modern equipment.

- **Threats**

- The population is increasing, life more difficult and depends largely on the nature, increasing pressure from resource depletion, environmental degradation.

- In Vietnam does not have many experts with experience in eco - tourism.

- The number of tourists tend to increasingly high demands on the variety, quality and type of service, unique tourism products and professional guides.

- Tourist market remains limited and seasonal.

- The competition of the neighboring destinations is increasing.

- The awareness of hygiene and environmental protection of visitors is not good.

- Safety issues in tourism is limited.

- Developing ecotourism widespread, low quality of service has caused negative effects to the development of ecotourism.

- The development of infrastructure affecting the stability of the natural environment NR.

- The ability to access information about NR is limited.

- The link with the departments in ecotourism strategy development is lack of tight.

3.3.2. *SWOT analysis and strategic development of ecotourism in Bac Lieu Bird Sanctuary Nature Reserve*

Table 2. Strategic solutions ecotourism development in Bac Lieu Bird Sanctuary Nature Reserve through SWOT analysis

Strategy S / O	Strategy W / O
<ul style="list-style-type: none"> - Leveraging resources to develop the forms and diverse tourism products of rich, unique, natural wetland ecosystem. - Link to the tourist destinations in the province and neighboring areas to create attractive and varied tours. - Implement policies for ecotourism investment. Recommendations to increase investment, attract capital from domestic and foreign organizations. - Protection and development of natural resource values, the environment, biodiversity, indigenous cultural values in the development of ecotourism. - Collaborating with educational institutions to attract and supply quality human resources. - Exploiting the IT development on the promotion and introduction of image NR to tourists. - Implement projects soon to come into operation ecotourism serve tourism development, as a basis for building new projects. - Facilitating and supporting policies to local community participation in ecotourism activities as well as conservation. - Increase knowledge and expertise to the staff, especially the field of ecotourism through the learning model, experience from other NRs and National Parks. - Linking local community with tourists through the traditional arts, culture and the arts and crafts products locally. 	<ul style="list-style-type: none"> - To mobilize investment capital to improve infrastructure - technical, media and services. - Developing electronic information page, publications, video about NR with multiple languages to promote the NR image to tourists. - To diversify forms and tourist products to meet the needs of domestic and foreign tourists. - Establishing true ecotourism programs, focusing on developing unique types of ecotourism, creating own brand in comparison with another tourist areas, the neighboring provinces. - Take advantage of the interest of the relevant departments in Bac Lieu province to exploit the potential available and build inter-regional tours. - To adopt preferential policies, linked to universities and colleges in order to attract high-quality human resources. - Planning, building infrastructure to serve ecotourism development in according with landscape, social and environment standards. - Establishment of department, specialized departments of ecotourism activities. - Maintain and enhance the propagation, the sense of community education for the conservation of natural resources, ensure security and order, culture of tourism behavior. - References experience in organizing and managing ecotourism activities from tourism companies, other NRs.

Strategy S / O	Strategy W / O
	<ul style="list-style-type: none"> - To encourage the participation of local authorities and local communities in the development of tourism activities. - Put the issue of environmental protection on the top, training staff on environmental protection, ensuring aesthetic to attract the tourists.
Strategy S / T	Strategy W/T
<ul style="list-style-type: none"> - Promoting advocacy, environmental education, natural resource value for the local community and visitors to limit the negative impacts. - Developing more checkpoints to strengthen forest and natural resources protection. - Creating new food products, ensuring food safety, hire guards, rescuers ensure safety and security and order. - Training and raising the level of management and organization of ecotourism activities for staff employees. - Equipping the material requirements necessary for the development of tourism. - Strengthening links with travel companies inside and outside the province to open more tours associated with NR. - Attracting investment funds, advisers and support from non-governmental organizations in strategic planning, infrastructure construction. - Training professional tourism to the community, raising awareness about ecotourism to have good behavior during tourist activities. - Training more staff with high qualifications for the protection of forests and biodiversity in NR - Taking advantage of natural resources, landscape, climate, topography, unique 	<ul style="list-style-type: none"> - Having proper recruitment policies, training of professional staff on ecotourism, management quality tourism services. - To create conditions for local community participation in tourism activities, to reduce pressure on fishing resources and negatively impact to the NR. - Strengthening coordination with local authorities in the conservation and protection of forests. - Searching the fund for development of ecotourism projects and upgrading infrastructures. - Planning, identifying the proper location to build infrastructure serving tourism, ensuring at least impacts to the natural environment. - Make use of existing roads, thereby upgrading the transportation system in accordance with NR tourism activities. - Review the carrying capacity of the natural environment in the NR with tourism activities. - Having research programs on the market, the seasonality of tourism to promote ecotourism and ensure a balance of visitors. - Establishment of signs and rules directed implement environmental protection

Strategy S / O	Strategy W / O
<p>culture of local area.</p> <ul style="list-style-type: none"> - Having policies associated with universities, colleges organizing training courses to develop quality staff, especially the ecotourism guiders. - Remind visitors and tourists about general hygiene (signs, the group games). - Construction department responsible for the environment, the landscape in order to operate timely in instruction, acting and responding to incidents. 	<p>regulations NRs for visitors and the local community.</p> <ul style="list-style-type: none"> - Use clean energy sources, the bio-friendly environment and avoid negative influences. - Establishment of information centers of biodiversity, building department responsible for environmental and educational programs for environmental protection, protection of natural resources to increase the awareness of the tourists, the orientation of emergency response for employee. - Regularly check the infrastructure and resources for tourism, ensuring the sustainability of resources. - Implementation of the impact assessment of the environmental impact on the construction and upgrading works in NR. - Development of diversified tourism products in order to meet the needs of visitors. - Enhance access to visitors through information channels (internet, newspapers, friends, relatives, travel companies, surveys).

3.3.3. *Some solutions to develop sustainable ecotourism in Bac Lieu Bird Sanctuary Nature Reserve*

Ensuring the sustainable development of the ecosystem in the tourism exploitation process is always important strategic goals of the national parks and protected areas. Being sensitive ecosystems and unique, Bac Lieu Bird Sanctuary NR is one of the attractive destinations for scientists, local and foreign tourists. So, to overcome these

weaknesses, current limiting disadvantage and to promote the strengths and opportunities in the tourism development process to ensure the sustainability Bac Lieu Bird Sanctuary NR is very essential.

Based on the SWOT analysis, the authors offer the following specific measures:

- *Setting up the master plan of ecotourism development clear and reasonable towards sustainability.*

Building master plan development of

the reserve ecotourism; ensuring the exploitation of natural resources and the rational use and sustainable development. Deployment of tourism development projects on schedule and promote the search for and construction of new tourism projects. To upgrade the road to Bird Sanctuary, routes and trails, as well as serve patrol ecotourism activities. Construction of the program, the development model as well as opening new tourist routes to exploit NR ecotourism towards links with the local and surrounding areas.

- *Close coordinating among stakeholders in the ecotourism development*

There should be a mechanism, policy and the division of responsibilities between state management agencies of Bac Lieu Province for conservation, tourism, management of the Bac Lieu Bird Sanctuary, tourism enterprises and local authorities.

+ It is necessary to develop rules and regulations on ecotourism activities of the NR.

+ Set up regulations on coordination among stakeholders in eco-tourism development activities in the NR in the direction of sustainable tourism (Department of Agriculture and Rural Development, Department of Information, Culture and Tourism of Bac Lieu province, Management Board of Bac Lieu Bird Sanctuary, Hiep Thanh Commune, local communities, etc.). Stakeholders have to commit to abide strictly by such rules, regulations and regulations. * Department of Agriculture and Rural Development, Department of Information, Culture and Tourism of Bac Lieu province: To play the

role of directing conservation and ecotourism activities in the NR.

* *Management Board (MB) of Bac Lieu Bird Sanctuary*: MB plays the most important role, gathering people who are actually involved in the ecotourism activities in the NR. The management board is equipped with the necessary skills and is empowered to decide and operate tourism activities within the NR.

* *The People's Committee of Hiep Thanh Commune-Bac Lieu City*: Mobilizing support and investment from the state, enterprises and community organizations, in the development of material facilities and tourism products, strengthening the law, education on tourism and conservation in the locality, grasping and protecting the security situation and instruction within the area, creating a bridge between the government, relevant agencies and the community, improving the quality of tourism products through attracting the community to participate actively in community-based ecotourism of the NR.

* *Environmental Education and Ecotourism Center*: This is the unit specializing in environmental education, organizing, providing ecotourism services of the NR. Manage the preparation and implementation of tourism development plans (including investment plans, business operations, tourism services, publicity, etc.) and takes decisions upon the basis of consultation to the parties concerned. The Center is responsible for the management of tourism businesses, individuals and households involved in tourism activities in the area, to plan and organize training activities, building community capacity for

tourism.

* *Business tourism:* Linking to NRs diversify tourism products, services and types of tourism; Exploiting and organizing effectively of ecotourism activities to attract tourists; Strengthening the advertising method with the content of advertising information; Introducing the nature reserve should be preserved with appropriate types of tourism, cultural characteristics, history, the achievements of the local people during the resistance war as well as the achievements in building and renovating the country.

* *Local community:* Through community representatives, responsible for organizing specialized groups to serve tourists visiting the NR. Members of the service teams should be included in the skills training program as well as awareness raising to be able to be proactive in sustainable tourism.

- *Strengthening the media activities, promoting the image area of Bac Lieu Bird Sanctuary Nature Reserve*

Stepping up the promotional activities, marketing images of NR culture through media channels such as newspapers, television... Establishing travel publications and websites to provide high quality travel information to closed to tourists. Upgrading biodiversity exhibition area, construction of production facilities for souvenirs, production of handicraft items to serve the needs of travelers.

- *Expanding cooperation, tourism development combined with conservation in order to attract investment; upgrading infrastructure systems - engineering - tourism infrastructure*

Besides the financial support from the

State, NR should promote of cooperation with non-governmental organizations, experts and scientists to strengthen the consultancy, research, investment and infrastructure, to upgrade quality tourist services such as ecolodges, hotels, restaurants, customer service, ... and to renovate, upgrade infrastructure, accommodation services towards environmental friendliness.

- *Training and development of human resources to serve ecotourism*

There are plans to recruit qualified human resources, specialized in ecotourism, biodiversity conservation ... Priority is local people with knowledge of the natural resources of indigenous areas. Train management fosters ecotourism and sustainable development for officials and employees of the reserve. Linking, cooperating with tourism training institutions to attract high quality human resources.

- *Attracting the local community to participate in tourism activities associated with real life conditions of people and regional natural resources conditions, thereby raising awareness of the people*

Facilitating in priority local people, especially communities Bird Sanctuary buffer zone involved in ecotourism activities, creation of employment, gradually raise the living standards of local people. Open training courses, training in ecotourism for the community to be involved in terms of tourist activities such as guides, cooking, catering stay ... In parallel, should promote enhanced people's awareness on biodiversity conservation and environmental programs through advocacy and education.

- *Strengthening the environmental management and biodiversity conservation in the development of tourism*

To arrange collection system, waste treatment. No discharge of untreated waste into the canals of the Bird Sanctuary; especially not to polluted freshwater lake serves drinking birds. Strengthening trash in densely tourists, where the employee's activities. Regular communication, environmental education for staff and people living around the NR. Strengthening the assessment of the impact on the environment and biodiversity for works and projects within the scope of the Bird Sanctuary and the buffer zone.

- *Building local economic structure in accordance with the needs of visitors and tourists to the Bac Lieu Bird Sanctuary NR*

Boosting economic structure towards business services ensure the needs of travelers. Take advantage of local products, culture of local art to attract customers and increase income for people. The key items of interest such as Bac Lieu salt, the photos of animals and plants in Bac Lieu Bird Sanctuary NR, handicraft products, fruit ... For arts and culture, traditional music is

considered as a strong characteristic that should also be considered.

4. Conclusion

At present, ecotourism is a type of tourism that many people are interested in and select because of proximity, friendly with the environment, experience and discover many interesting things in nature.

Bac Lieu Bird Sanctuary NR is an area with great potential for developing sustainable eco-tourism and is considered one of the current outstanding strengths of Bac Lieu province. To boost tourism activities in Bac Lieu Bird Sanctuary NR will have a huge role to encourage the development of tourism in the Bac Lieu province in particular, the nature reserve and national park in the Mekong Delta in general with many similarities in natural conditions, biological diversity and tourist characteristics.

With the current reality, unified planning and development direction, applying flexible solutions that fit analysis above will help exploit the potential of Bac Lieu Bird Sanctuary NR sustainable efficiency./.

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