

¹Sustainable Development Strategy For Ecotourism at Tangkahan, North Sumatera

Agung Suryawan Wiranatha

Udayana University, Bali

Coessponding author: balitruly@yahoo.com

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ABSTRACT

Ecotourism Destination of Tangkahan is located at the edge of Gunung Leuser National Park, within the Sub-regency of Batang Serangan, Regency of Langkat, Province of North Sumatera, Indonesia. The Ecotourism Destination of Tangkahan relies upon a distinctive tourist attraction, namely *elephant trekking* that is undertaken along the edge of the river and in the Gunung Leuser National Park (GLNP), as well as the diversity of flora and fauna available at the GLNP. There are many activities can be undertaken by visitors at this destination, such as: elephant trekking, wildlife watching at the GLNP, trekking at the edge of Buluh river and come back by swimming wearing life jacket, tubing (traditional rafting) and canoeing at Batang Serangan river, swimming at Buluh river, camping and outbound activities at the camping ground, village tour at sub-village of Kuala Buluh, and traditional massage (*pijat / kususuk*) by local therapist. The research was undertaken to develop strategies which could be used as guidance in managing and developing this ecotourism destination. The proposed strategies were based upon the results of SWOT analysis. Data were assembled from the visitors' survey, focus group discussions and workshop involving tourism stakeholders and several interested groups. Based upon the analysis of existing tourist attractions offered at the Ecotourism Destination of Tangkahan, it could be said that the nature based tourist attractions were considered to be interesting up to very interesting. The uniqueness of elephant jungle trekking in the GLNP was the tourism icon of the Ecotourism Destination of Tangkahan. Camping ground, plant nursery, and agriculture plantation were potential to be promoted as tourist attractions at the Ecotourism Destination of Tangkahan. Based upon the results of SWOT analysis of the Ecotourism Destination of Tangkahan, several strategies could be recommended for ecotourism development at Tangkahan, namely, to maintain the diversity of flora and fauna at GLNP as ecotourism attractions at Tangkahan, to develop nature based tourism with consideration on the principles of ecotourism and conservation, to improve safety measures for visitors and guides who are undertaking tourism activities at the ecotourism destination of Tangkahan, to revitalize the traditional music and dances that are existed at the community of Tangkahan to become a tourist attraction, to establish an effort to extend the elephant trekking attraction that has been available at Tangkahan, to increase the number of elephants at the Community Respons Unit (CRU) Tangkahan, which are available for elephant trekking for tourists in order to accommodate an increasing demand of the elephant trekking in the near future, to organise the schedule of elephant trekking activities during rainy season, to improve the quality and quantity of the accommodation available at Tangkahan, to establish an emergency system (Search and Rescue - SAR) at Tangkahan, establish a

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solid waste management system at Tangkahan, to develop sewerage treatment systems for accommodation and restaurant at Tangkahan, to develop land transportation facilities (particulatly roads) at Tangkahan, to improve the accesibility to the locations of tourist attractions within the ecotourism destination of Tangkahan, to establish a banking facility at Tangkahan, to build public toilets, as well as to establish a management of public toilet at Tangkahan, to establish an institution to manage parking area at Tangkahan and to establish electricity networks at the centre of Tangkahan tourist area.

Keywords: ecotourism, elephant trekking, wildlife watching, sustainable development.

Introduction

Eco-tourism is getting popular as an alternative form of tourism activity which is expected to bring benefits for the regional economy and to contribute to the nature conservation. Some countries have implemented eco-tourism in managing national park. Eco-tourism has been recognized to contribute to nature conservation, and to bring sustainable benefits to the park management, local community, and government (Sudarto, 1999). The eco-tourism type of national park management is also possible to be implemented in the area of Gunung Leuser National Park (GLNP) that covers an area of 1,094,692 hectares within the region of two provinces, namely North Sumatera and Nanggroe Aceh Darusalam (NAD). The GLNP has various tourist attractions which also consider being exotic, such as orangutan at Bukit Lawang (North Sumatera), and elephants at Conservation Response Unit (CRU) Tangkahan (North Sumatera).

This paper focuses on the eco-tourism at Tangkahan in which the elephants are the main attraction. Some elephants have been taken care by the CRU Tangkahan for jungle patrol and to protect the agricultural area near the forest from the wild elephants. However, these elephants have also become attractions for tourists, such as elephant trekking (Gunawan, 2008). The tourist areas of Tangkahan has been known as one of the popular eco-tourism destinations at North Sumatera Province. However, eco-tourism development at Tangkahan was cosidered to face some challenges, such as: lack of community awareness on nature conservation and

environmental sanitation, lack of accessibility and tourism facilities, and lack of supports from local government (Langkat Regency) and provincial government (North Sumatera Province).

Regarding the above challenges, this paper aims to provide some directions which were obtained from an academic study and analysis in order to develop sustainable eco-tourism development at Tangkahan. The objectives of the study were:

- (i) to analysis of existing tourist attractions and facilities available at Tangkahan;
- (ii) to undertake an analysis of internal and external factors related to eco-tourism development at Tangkahan; and
- (iii) to establish the strategies and programs that could be used as guidance in managing and developing ecotourism destination at Tangkahan by the tourism stakeholders.

The study was undertaken in several steps, namely:

- (i) research preparation, including: literature review, developing research instruments (check lists, questionnaires, and interview guide), and undertaking a coordination effort with provincial and local government, and Kantor BB TNGL.
- (ii) data collection: undertaken by field survey, including on site observation, distributing questionnaires and interview to visitors, tourism stakeholders and local community, and Focus Group Discussion (FGD) involving tourism stakeholders and local community (Riley, 1991).

- (iii) data analysis: undertaken by using tourism destination indicators to analysis of existing tourist attractions and facilities available at the study area, level of importance analysis, Internal and External Factors (IFAS-EFAS) Analysis, SWOT analysis (expert judgement) (Rangkuti, 1998).
- (iv) workshop: undertaken in order to develop a recommendation of eco-tourism development strategies and programs, involving tourism industry, local government tourism authorities, local community and NGOs at the study area.

Results and Discussion

Description of the study areas

Eco-tourism Destination of Tangkahan has been relied upon a distinctive tourist attraction, namely elephant trekking that is undertaken along the river edge and in the GLNP, as well as the diversity of flora and fauna available at the GLNP. Other tourist attractions at Tangkahan, such as:

- Nature based attractions, such as: Batang Serangan river and Buluh river, Alur Garut and Gelugur water fall, Buluh river and Gelugur hot springs, caves (Gua Kalong, Gua Kambing Hutan, and Gua Langkup Gendek), and palm oil plantation.
- Culture based attractions, such as: culture and tradition of several ethnics i.e. Karo, Melayu and Java with their traditional dances and music such as: Piso Surit and Terang Bulan Dance (Karo); Jaran Kepang & Ludruk Dance (Java); and Sekapur Sirih and Serampang Dua Belas Dance (Melayu)

There were various tourist activities that could be done by visitors at Tangkahan, such as: elephant trekking, tubing (traditional rafting) at Batang Serangan river, swimming at Buluh river, camping and outbound activities at the camping ground, wildlife watching at GLNP, village tour at Kuala Buluh sub-village, trekking at Buluh river and come back by swimming wearing life jacket, canoeing at Batang Serangan river, and traditional massage (*Pijat / Kusuk*) by local therapists.

Tourism facilities and services were also already available at Tangkahan, but they were considered to be insufficient yet. The facilities and services were including: 6 units accommodation (bungalow and homestay) about 42 rooms with simple facilities, 5 units restaurant / *rumah makan* with 25 tables, one travel agent namely Community Tour Operator (CTO) owned by Lembaga Pariwisata Tangkahan (LPT), and 11 tourist guides who can speak English.

Eco-tourism Tangkahan was supported by several supporting facilities, such as : a visitor centre, a traditional water-based transport made from wood and bamboo (*rakit*), elephants for elephant trekking activities, foot path for trekking in the GLNP, elephant trail, rubber tube that can be rent by tourist for *tubing* in the river, elephant garden which has been planted for sugar cane and grass (elephant feeds) with organic fertilizer from elephant's manure, camping ground, and 2 units public toilets located at the back of LPT's Office. However, there was no currency exchanger, and no electricity network by PLN and no telephone line by Telkom to the tourism area of Tangkahan. Communication can be made through seluler phone only. Parking area was also considered to be limited.

Tangkahan has already been known by international tourists. In year 2008, there were 979 international tourists visiting Tangkahan. The number of international tourists visiting this destination has increased sharply comparing to year 2005 (316 tourists), i.e. increased in average of 69.9% per annum. The number of domestic tourists visiting this destination was much more significant than international tourists. During the year 2008, the number of domestic tourists visiting Tangkahan was 8,761 tourists. Comparing to the number of domestic tourists visiting this destination in year 2005 (6,476 tourists), it increased in average of 11.8% per annum.

Based upon the survey undertaken to international tourists, it could be said that:

- 67% tourists got information regarding Tangkahan from *website*, and 33% tourists got information from other sources (friends, travel agent and others).

- The impressions on eco-tourism at Tangkahan were mostly positive, such as on environmental management (94%), people friendliness (83%), and tourism destination management (100%).
- 72 % tourists visited Tangkahan for the first time, and 28 % tourists have visited Tangkahan for more than one time.
- 89% tourists suggested that souvenir shops should be available at Tangkahan.
- All tourists would like to come back again to Tangkahan sometime.
- 50% tourists stayed more than one day at Tangkahan, and 94% tourists stayed in bungalow or homestay at Tangkahan.
- 67 % tourists spent their money more than Rp. 1,000,000 during their visit at Tangkahan.
- The employment opportunities resulted from the accommodation and restaurant at Tangkahan were estimated about 32 persons at accommodations and about 10 persons at restaurants.

Analysis of tourist attractions and facilities

Based upon the analysis of existing tourist attractions and facilities at Tangkahan, it could be said that:

- Nature based tourist attractions at Tangkahan were considered to be interesting up to very interesting. The uniqueness of elephant jungle trekking in the GLNP is the tourism icon of Tangkahan.
- Culture based tourist attractions at Tangkahan were considered to be interesting. Traditional foods, traditional medicines and local tradition were considered to be potential to be promoted as tourist attractions in order to support eco-tourism at Tangkahan.
- Man-made tourist attractions at Tangkahan were considered to be interesting up to very interesting. Camping ground, plant nursery, and agriculture plantation were potential to be promoted as tourist attractions at Tangkahan.
- Accessibility to Tangkahan was considered to be not good, particularly in term of transportation and communication facilities.
- Tourism facilities and services at Tangkahan were considered to be good

and sufficient, especially restaurant/*rumah makan*. However, accommodation and travel agent, as well as banking facility, public toilet and parking area were considered to be not sufficient yet.

Based upon the results of analysis of level of importance of tourist attractions and facilities, it could be said that:

- There were some tourist attractions considered to be very important, namely: diversity of fauna, uniqueness of fauna, view of nature, and tourist activities available at the destination.
- There were several tourism facilities and services considered to be very important, namely: restaurant / *rumah makan* and public toilet.
- Some tourist attractions were considered to be important, namely: diversity and uniqueness of flora, handicrafts, traditional arts, traditional foods, traditional architecture, agriculture plantation, and camping ground.
- Several tourism facilities and services were considered to be important, namely: accommodation, travel agent, and banking facilities (including currency exchanger).
- Several accessibility indicators were considered to be important, namely: transportation and communication facilities.

Analysis of Internal and External Factors

Some internal factors were considered to be the strengths of Tangkahan as an eco-tourism destination, namely:

- 1) Tourist attractions (nature, culture, and man-made)
- 2) Tourist activities available at the tourist destination
- 3) Tourism facilities (accommodation and restaurant)
- 4) Land zoning of the tourism area
- 5) Institutions related to tourism management (community or private)
- 6) Community awareness on tourism (*sadar wisata*)
- 7) Community and tourism industry awareness on nature conservation

On the other hand, some internal factors were also considered to be the weaknesses of Tangkahan as an eco-tourism destination, namely:

- 1) Accessibility (land transportation)
- 2) Tourism supporting facilities (public toilet, parking area, health-care facilities)
- 3) Human resources for tourism
- 4) Tourism marketing
- 5) Capability of the local community to invest in tourism
- 6) Cleanliness and environmental sanitation
- 7) Risk of accident during tourist activities.

Based upon the analysis of internal factors (IFAS), the overall internal factors at Tangkahan got score of 2.66. It means that these internal factors were considered as the strengths of Tangkahan as an eco-tourism destination.

Several external factors were considered to be the opportunities for Tangkahan as an eco-tourism destination, namely:

- 1) Interest of tourists to visit a tourism destination
- 2) World trend of 'back to nature'
- 3) Situation of politics and security (global and national)
- 4) Government role in tourism development (regency, province and central government)
- 5) Collaboration with other institutions.

However, some external factors were considered to be the threats for Tangkahan as an eco-tourism destination, namely:

- 1) Economic situation (global and national)
- 2) Competitors from similar type of destinations
- 3) Illegal logging
- 4) Sustainability of the tourist attraction (elephant trekking).

Based upon the analysis of external factors (EFAS), the overall external factors at Tangkahan got score of 2.60. It means that these external factors were considered as the opportunities of Tangkahan as an eco-tourism destination.

Recommendation for Ecotourism developmet

The strategies and programs that are recommended for tourism development at Tangkahan as an eco-tourism destination, namely:

- 1) **Strategy:** To maintain the diversity of flora and fauna at GLNP as eco-tourism attractions at Tangkahan.

- Programs:**
- a) To identify flora and fauna that are available at the GLNP Tangkahan
 - b) To publish a pocket book about flora and fauna available at the GLNP Tangkahan
 - c) To carry out a socialization program for guides, tourists and community about conservation principles and the law of endanger species protection.
 - d) To develop tourist attractions based on wild fauna available at the eco-tourism destination of Tangkahan, such as bird and butterfly watching.

- 2) **Strategy:** To develop nature based tourism with consideration on the principles of eco-tourism and conservation.

- Programs:**
- a) To establish code of conduct (CoC) and standard operating procedure (SOP) for tourism activities that are available at the eco-tourism destination of Tangkahan.
 - b) To carry out training on CoC, SOP and the principles of eco-tourism for guides who work at the eco-tourism destination of Tangkahan.
 - c) To inform visitors about CoC for tourism activities at the eco-tourism destination of Tangkahan.

- 3) **Strategy:** To improve safety measures for visitors and guides who are undertaking tourism activities at the eco-tourism destination of Tangkahan.

- Programs:**
- a) To provide life jackets for visitors and guides who are doing tubing.
 - b) To provide standard outbound equipments and

- qualified outbound guides for outbound activities.
- c) To carry out training on First Aid and providing First Aid kit for guides who work at the eco-tourism destination of Tangkahan.
- d) To provide insurance cover for visitors and guides who are doing high risk tourism activities (such as elephant trekking, elephant jungle patrol, tubing, and outbound) at the eco-tourism destination of Tangkahan.
- 4) **Strategy:** To revitalize the traditional music and dances that are existed at the community of Tangkahan to become a tourist attraction.
- Programs:** a) To empower the traditional dance group by providing trainers and supporting with new music instruments and costumes.
- b) To perform the traditional music and dances with traditional foods for tourists in a package called a traditional dinner night.
- 5) **Strategy:** To establish an effort to extend the elephant trekking attraction that has been available at Tangkahan.
- Programs:** a) To propose a request for the continuation of the existence of the CRU and elephants at Tangkahan.
- 6) **Strategy:** To increase the number of elephants at the CRU Tangkahan, which are available for elephant trekking for tourists in order to accommodate increasing demand of the elephant trekking in the near future.
- Programs:** a) To propose a request to obtain more elephants that are available at the CRU Tangkahan in the near future.
- 7) **Strategy:** To organise the schedule of elephant trekking activities during rainy season.
- Programs:** a) To organise the schedule of elephant trekking activities during rainy season, therefore there will be a balance between tourism and conservation.
- 8) **Strategy:** To improve the quality and quantity of the accommodations available at Tangkahan.
- Programs:** a) To improve the quality of accommodations belong to the local community by renovating and repairing the existing accommodations, and should be supported by soft loans from government or bank.
- b) To increase the number of better quality accommodations that are available at Tangkahan by inviting investors to build a new accommodation.
- 9) **Strategy:** To establish an emergency system (Search and Rescue - SAR) at Tangkahan.
- Programs:** a) To provide SAR equipments (rubber boat and other equipments).
- b) To facilitate the availability of helath-care facilities (clinic or *Puskemas*) at the location of eco-tourism destination of Tangkahan.
- 10) **Strategy:** To establish a solid waste management system at Tangkahan.
- Programs:** a) To establish a community based institution for solid waste management at Tangkahan under supervision of LPT.
- b) To increase the availability of garbage bins at the strategic locations within the area of eco-tourism destination of Tangkahan.

- c) To improve the role of local government in solid waste collection by providing a truck to collect garbage at the eco-tourism destination of Tangkahan.
- 11) Strategy: To develop sewerage treatment systems for accommodations and restaurants at Tangkahan.
Programs: a) To build a simple sewerage treatment plant that is suitable for each accommodation and restaurant at Tangkahan.
- 12) Strategy: To develop land transportation facilities (particulatly roads) at Tangkahan.
Programs: a) To improve the quality of roads toward the eco-tourism destination of Tangkahan, especially the roads at the palm oil plantation.
- 13) Strategy: To improve the accesibility to the locations of tourist attractions within the eco-tourism destination of Tangkahan.
Programs: a) To build a more permanent foot paths connecting amongst the locations of tourist attractions within the eco-tourism destination of Tangkahan.
b) To build a simple hanging bridge as a mean to cross the Batang Serangan river from the back of LPT Office.
- 14) Strategy: To establish a banking facility at Tangkahan.
Programs: a) To establish a currency exchanger (a business unit under the LPT) in collaboration with a currency exchanger company that is existed in Medan.
- 15) Strategy: To build public toilets, as well as to establish a management of public toilet at Tangkahan.
Programs: a) To build new public toilets at several strategic places at Tangkahan, particularly at the camping ground, and near the hot spring at Buluh river.
b) To build new public toilets at sub-village Kuala Buluh, in order to accommodate tourists during their activities (village tour) at sub-village Kuala Buluh.
c) To establish a management of public toilets at Tangkahan, under supervision of the LPT.
- 16) Strategy: To establish an institution to manage parking area at Tangkahan.
Programs: a) To establish a management of parking area by the local community under supervision of the LPT.
- 17) Strategy: To establish electricity networks into the Tangkahan tourist area.
Programs: a) To facilitate the extension of electricity networks up to the centre of Tangkahan tourist area. It is required about 10 electricity poles to reach the centre of Tangkahan tourist area from the existing electricity pole.

Conclusions

- The uniqueness of tourist attraction of *elephant jungle trekking* undertaken along the edge of the river and in the Gunung Leuser National Park (GLNP) was the most attractive attractions at eco-tourism destination of Tangkahan. Other attractive attractions were the nature based attractions including diversity of flora and fauna available at the GLNP. Eco-tourism destination of Tangkahan was also supported by cultural based attractions, such as traditional dances and music, traditional foods and medicines available at Tangkahan.

- Accessibility indicators in terms of transportation and communication facilities were considered to be important by the visitors, however, accessibility to Tangkahan was considered to be not good.
- The availability of tourism facilities and services, such as public toilets, accommodations, travel agents, and banking facilities (including currency exchanger) were considered to be important by the visitors, however the availability and the services provided by accommodations and travel agent, as well as banking facilities, and public toilets were considered to be not sufficient yet.
- Based upon the results of analysis of existing tourist attractions and facilities available at Tangkahan, it could be said that Tangkahan was categorized as a developing eco-tourism destination.
- Based upon the results of SWOT analysis of the eco-tourism destination of Tangkahan, several strategies could be recommended for ecotourism development at Tangkahan, namely:
 - (a) To develop nature based tourism with consideration on the principles of ecotourism and conservation.
 - (b) To improve safety measures for visitors and guides who are undertaking tourism activities at the ecotourism destination of Tangkahan.
 - (c) To revitalize the traditional music and dances that are existed at the community of Tangkahan to become a tourist attraction.
 - (d) To increase the number of elephants at the Community Respons Unit (CRU) Tangkahan, which are available for elephant trekking for tourists in order to accommodate an increasing demand of the elephant trekking in the near future.
 - (e) To improve the quality and quantity of the accommodation available at Tangkahan.
 - (f) To establish an emergency system (Search and Rescue - SAR) at Tangkahan.
 - (g) To establish a solid waste management and sewerage treatment system at Tangkahan.
 - (h) To improve land transportation

facilities (particulatly roads) at Tangkahan.

- (i) To improve the accesibility to the locations of tourist attractions within the ecotourism destination of Tangkahan.
- (j) To establish a banking facility, and to build more public toilets as well as to establish a management of public toilets at Tangkahan.
- (k) To establish electricity networks into the Tangkahan tourist area.

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