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The alignment of perceptions, motivations and preferences amongst stake holders on wild elephant ecotourism development in Bukit Barisan Selatan national park, Lampung Province - Indonesia

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Abstract

The alignment of perceptions, motivations and preferences amongst stakeholders in ecotourism development program does not only cause an inefficiency and ineffective process of ecotourism development, but also cause such kind degradation value of ecotourism resources itself. In this matter, a research regarding the alignment of perceptions, motivations and preferences between stakeholders in elephant ecotourism development in the Bukit Barisan Selatan National Park (BBSNP) is important to be conducted. This study involved three vital stakeholder in BBSNP, namely local people (Pemerihan, Sumberejo, and Way Haru villages), the BBSNP-officers, and tourists. In assessing the alignment, a closed-ended questionnaire was designed to map the perceptions, motivations, and preferences of every stakeholder about elephant, program of elephant ecotourism, ecological impact, social-economy and cultural aspects, as well as about management orientation. The result of chi-square test on 100 sets of stakeholder's perceptions showed that only 60% which are statistical aggregately classified as *insignificant* (aligned); aggregately the perception between local people, BBSNP-officers, and tourists also only shows 50% of alignment. The aggregate value of motivation between the people of Pemerihan, Sumberejo & Way Haru is 60.3% *un-aligned*, while the aggregate value of motivation between local people, BBSNP-officers and tourists is 100% in *un-aligned*. Last, the aggregate value of preferences amongst all stakeholders is also 100% in *un-aligned*.

Keywords: Elephant Ecotourism, Perception, Motivation, National Park

1. Introduction

A success of tourism development does not only need a proper investment support, but also a proactive involvement from related stakeholders, who act as implementor of various expected goals. Therefore, the alignment of perceptions, motivations, and preferences of stakeholder is undeniably a fundamental key to tourism development.

In the context of investment support, Inskeep and Kallenberg (1992, in Sharpley and Telfer, 2002: 57) state that World Bank has granted financial support for hotel development in Bali (US \$ 14,3 million), resort in Korean Republik (US \$ 25 million), resort in Dominica Republic (US \$ 25 million, and Turki (US \$ 26 million). In the same line, Telfer (2002: 57) states that two agents of World Bank Group, namely International Finance Corporation (IFC) and Multilateral Investment Guarantee Agency (MIGA) have actively granted some donation for Africa, Asia, Europe, South America and Caribbean, and Middle Asia, East Asia, and North Africa. These donation are economical, top-down, involve less local people, and particularly intended for hotel infrastructure,

The various tourism investment pattern has become determiner in developing a sustainable tourism development. Long and Wall (1993, in Sharpley and Telfer, 2002: 59) state that there are several differences of investment pattern done by World Bank in Papua New Guinea and some places in Bali; where many local ownership based-small scale guesthouses have become a viable form of tourism industry. Gun (1994: 85) states that tourism planning should be developed based on sustainable development principles.

Besides, Telfer (2002: 60) states that there are many models of sustainable development, one of them is Bali Sustainable Development Project (BSDP), which emphasizes on three main criteria, namely: (1) the continuity of production and natural resources; (2) the continuity and balance of culture, and (3) tourism development as a process to improve life quality. These criteria include ecology integrity, efficiency, cultural balance and local people.

Whenever those criteria are harmoniously developed with tourism development,

therefore a sustainable tourism development factor is determined by quality of relationship between stakeholder. According to Neil and Wearing (1999: 73), a tourism failure promoted by both government and tourism management is mostly caused by poor strategy, less consultation to local people, or ineffective planning of area protection management. Whereas, the authentic culture of certain local people is susceptible to disappear as the impact of tourism development.

Those different conditions are influenced by some factors, such as different perception, motivation, and preferences between local people, manager and tourists. According to Gibson (1966, in Gross 2013), perception is a process of active thinking that is influenced by learning processes and empirical experiences. While, Gross (2013: 292) defines perception as an organization and interpretation of sensory information that form spiritual representation of external world.

In relation to motivation, Medlik (2003: 113) affirms that motivation is a psychological stimulation that encourages someone to perform some actions in order to attain certain goals. Besides that, Jenkins and Pigram (2003: 313) state that motivation is personal and subjective, so that it may differ someone's logic and reasoning.

The difference of people's perception can be caused by their prior information and experiences formed from different environments. While different motivation is influenced by different needs, so that they can choose different action. According to Gross (2013: 169), based in Maslow Theory, a lower needs in hierarchy should be fulfilled first before fulfilling higher needs.

The differences of perceptions, motivations and preferences can become a burden in developing ecotourism. According to Li and Cai (2004: 863) and Mao et. al. (2005: 992), it is important to understand an agreement between perception, motivation and preference between stakeholder. Besides, Santoso (2010: 217) affirms that an agreed perception between group members and between groups are the keys to functioning the groups in development system. The social groups can become efficient aspects and a way to fulfill their needs, when there is an agreed perception between members of the group can be reached.

Considering the importance of alignment between perceptions, motivations and preferences amongst stakeholders in tourism development, therefore these three factors should be fulfilled in order to grow and develop elephant ecotourism in Pemerihan and Way Haru Resorts on Bukit Barisan Selatan National Park (BBSNP) in Lampung Province, Indonesia. This consideration becomes more important since a lot of elephant disturb local people's planting areas regularly in some villages surrounding the national park.

Based on those aforementioned consideration, a research is important to be conducted in order to: (a) find out positive and negative perception from stakeholders' point of view; (b) to know discrepancy between positive and negative perception possessed by stakeholder; and (c) to describe a harmonious relationship between stakeholder groups. Therefore, to build a comprehensive knowledge, this research has also discovered the motivation and preference of the stakeholders towards elephant and land management in BBSNP.

2. Materials and methods

This research was conducted in the area of BBSNP along Januari-July 2014. The questionnaire was distributed to local people in Pemerihan, Sumberejo and Way Haru Villages, Pesisir Barat Regency, Lampung Province. This site was chosen since it has high intensity of elephant-human conflict and it is directly bordered with elephant home range.

The questionnaire for the tourists was administered in the location of Camp Elephant Patrol. It is a focal point area for the tourist to enjoy elephant ecotourism. The questionnaire for manager was administered in TNBBS office, located in Kota Agung and Pemerihan.

To find out the alignment of perceptions, motivations and preferences among stakeholder- groups, a close-ended questionnaire was used. The stakeholder was classified into 5 groups, namely: people of Pemerihan (Pm), Sumberejo (Sr), Way Haru (Wh), the manager (Pg), and tourists (Wi).

The numbers of sample in each stakeholder were 30 respondents. They were chosen randomly which is addressed to family head in every village. Next, the respondent from management consisted of the management staffs of the BBSNP and the WWF Lampung (both so called BBSNP- officers). Last, the questionnaires randomly distributed to adult tourist who were visiting Camp Elephant Patrol.

The close-ended questionnaire was designed by using *One Score-One Indicator Method* (Avenzora, 2008) using Likert Scale which was expanded from 1-5 into 1-7 scales. The main points of perceptions, motivations, and preferences used in this questionnaire are presented in **Table 1**.

Table 1: The matrix of questions guideline regarding perception, motivation and preference of stakeholder.

	Aspects	Pm	Sr	Wh	Pn	Wi
The Orientation of Perception						
• Elephant	v	v	v	v	v	v
• Elephant Ecotourism	v	v	v	v	v	v
• Impact to the habitat	v	v	v	v	v	v
• Economical impacts	v	v	v	v	v	v
• Socio-cultural impacts	v	v	v	v	v	v
The Orientation of Motivation						
• Working on the land	v	v	v			
• Involved in ecotourism (passsive)	v	v	v			
• Ecotourism involvement (active)	v	v	v			
• Ecotourism management	v	v	v	v		
• Directly encounter the elephant						v
• Seeing the attraction of domesticated elephant						v
• Seeing the attraction of wild elephants						v
• Seeing elephant habitat						v
Preference						
• Wild elephant management	v	v	v	v	v	v
• Land management in BBSNP	v	v	v	v	v	v
• Land management outside BBSNP	v	v	v	v	v	v
• Supports to be given	v	v	v	v	v	v

The data processing was done by summing the frequency of answer on every listed-indicator. Then, each frequency is multiplied with the score of related indicator, which is resulted as *indicator score*. After that, the *indicator-score* is summed to get *cumulative score*. Next, the difference between cumulative positive and negative scores are counted to determine the stakeholder tendency.

In this research, the *positive perception* is defined as any assessment given by stakeholder towards the good dynamics or something that is relevant with their desire. While *negative perception* is poor assessment or something irrelevant with their desire.

Then, chi-square test was used to find out the agreement between stakeholder group. This test was done by pairing two stakeholders combination or side-by-side. The test was done by using the following equation (Kusmayadi & Sugiarto, 2000):

$$\chi^2_{hit} = \frac{\sum(O_{ij} - E_{ij})^2}{E_{ij}}$$

Explanation:

O_{ij} = observation score E_{ij} = expected value
E_{ij} = score $\frac{EO_i \times EO_j}{N}$ N = total observation score

The built hypotheses was:

H₀ = there is not any differences in the score given by stakeholder groups

H₁ = there is difference in the score given by stakeholder groups

Then:

1. If $\chi^2_{hit} < \chi^2_{tab} (0.05, k-1)$, then H₀ is accepted, in meaning there is not any significant changes between stakeholder groups OR aligned.
2. If $\chi^2_{hit} > \chi^2_{tab} (0.05, k-1)$, then H₀ is rejected, in meaning there is any significant differences between stakeholder groups OR un-aligned.

3. Results & Discussion

The Characteristics of Stakeholder

The people of Pemerihan, Sumberejo and Way Haru generally have low education background. Based on monography report, up until 2013 the composition of educational background of the people are: uneducated (24.9%), primary school (24.1%), junior secondary school (25.2%), senior secondary school (25.2%), diploma (0.3%), bachelor (0.8%), and master (0.1%).

Most of the people are farmers (60%). They plant corn and rice in rain cistern land and harvest them three times a year. Seven of them work as elephant handler in BBSNP and 3 of them work as tree identifier staff in NGO.

Most of them are Islam (97.7%), then followed by Christian (1%) in Pemerihan and 0.4% in Sumberejo. There are some Hindu in Way Haru (3.2%) and Sumberejo (2.3%).

The total residence area in each village is 45.5 km² (in Way Haru), 36.4 km² (in Pemerihan), and 39.2 km² (in Sumberejo). The population density in Sumberejo is the highest compared to population number in Pemerihan and Way Haru.

The BBSNP management is dominated by male employees. There are 114 employees which are distributed in 4 management sections, namely: Section I - Sukaraja, Section II - Bengkumat, Section III - Krui, and Section IV - Bintuhan. The employees consist of 102 males and 12 females.

All employees in Section II Bengkumat, Pemerihan and Way Haru Rayons are male. The field staffs in Pemerihan consist of 8 males, which consist of Head of Rayon and his staffs, of Forest Ecosystem Controller (locally well known as PEH), and Community of Forest Police Partner (locally well known as MMP).

The educational background of BBSNP employees are dominated by senior secondary school graduates (64%). There are no employees who have doctoral degree, but there are 6% employees who have attained master degree. Rest of them have bachelor degree (18%), diploma degree (9%), junior secondary

school degree (92%), and unfortunately there are still 1 % employees with primary school educational background only.

The tourists are dominated by domestic tourists. In 2013, there were 1,735 domestic tourists and 198 foreign tourists. The pattern of tourist visit is dynamic, but in the last 3 years the number of domestic tourist are significantly increasing and on the contrary, the numbers of foreign tourist are slowly decreasing. For many years of the past, the ratio between foreign and domestic tourist was 1:7, but for the last 3 years the growth rate of domestic visit was approximately 159 people/year, while the foreign tourist only 19 people/year.

In average, the respondent-tourists who visit Pemerihan Resort are 32 years old. Their educational background are bachelor (60%), diploma (13%), senior secondary school (17%), and junior secondary school (10%). Their profession are entrepreneur (47%), employees (30%), college students (23%). They consist of 67% domestic tourists and 37% foreign tourists. Their visits are part of organizational activities (53%), visit with friends (44%), and alone (3%), and none of them make visit with a family.

Generally, the respondent-tourists made their first visit (50%) and did not stay overnight. The composition of their income is varied, and highest proportion is Rp 4 million (43%). Besides, the tourists who earn Rp 100.000 - Rp 1 million are about 25%. During their tour, they do not shop; since there are no products sold by the local people and management.

4. Stakeholder Perception towards Wild-Elephant

The perception data of Way Haru People (WHP) shows a negative cumulative score, compared to other 4 stakeholders who show positive scores. The score-difference of *positivenegative perception* is -53, while the score-difference of other stakeholders are 551 for Pemerihan, 591 for Sumberejo, 662 for BBSNP-officers, and 756 for tourists.

The people of Way Haru *quite disagree* that elephant is a protected and endangered animal. They explained that the elephant often entered their garden or farming lands; once in two months throughout the year. There were also a big group of elephant (about 15 elephants) which often damaged their rice and chocolate plants; so those are the reasons why they perceive elephant as plant pest. According to Muchapondwa *et. al.* (1998: 67), the people in Zimbabwe do also not really support elephant preservation, since the elephants harm their plants. In the same line, Ebua *et. al.* (2011: 631) also report that 74% people of Bakassi Cameroon stated that the conservation of wild animals, including elephant, does not provide any advantages for them.

The tourists and BBSNP-officers answered *quite agree to agree* facing elephant as charismatic animals, seed disseminator, disaster sign giver, and pacesetter in the forest. However, the people of Way Haru gave their *not quite agree to so-so* answers to the same question about facing elephant; they even consider elephant as horrifying and harmful animal that becomes human's enemy.

In Way Haru there is a story of how a married couple was killed by a wild elephant in 2013 and in the same year a group of elephant also ate and destructed their ready harvested paddy field for more than 1 hectare. Those experiences made their intensely negative perception towards elephant. If this perception is not handled, elephant killing may happen. Stromayer (2003: 81) describes that elephant killing by people once happened in India and Sri Lanka. There were 30 elephants poisoned by Assam people in India, and 110 elephants killed in Sri Lanka. The reason was because the elephant had eaten and harmed their plants.

The test result of positive perception shows that 4 of 10 combination of stakeholder pairs are *significantly aligned* and the rest 6 pairs are *un-aligned* (Figure 1a and 1b). It reveals that

every stakeholder shows different perception.

The test result of negative perception shows 8 pairs of in *unaligned* pairs, and only two pairs are *aligned* (Figure 1c and 1d); $\chi^2_{cal} = 1,8 < \chi^2_{tab_{a=0,05,df=6}} = 12,6$ between BBSNP-officers and tourists, and $\chi^2_{cal} = 9,6 < \chi^2_{tab_{a=0,05,df=6}} = 12,6$ between Pemerihan people and Sumberejo people. It is strongly predicted that the alignment occurred since the tourists and BBSNP-officers have higher educational background (at least senior secondary school), therefore they get a lot of access to information about elephant preservation. While the people of Pemerihan and Sumberejo probably have good interaction with the manager and working partners; since they have a meeting for at least once a year.

5. The perception towards elephant ecotourism

The stakeholders perceptions towards elephant ecotourism have not shown their full support to elephant ecotourism development. Even though the four stakeholders (people of Pemerihan & Sumberejo, BBSNP-officers and tourists) show their positive perception, but the people of Way Haru again shows their negative perception. Their score is -127, while the people of Pemerihan score is 715, score of Sumberejo people is 728, the score of BBSNP-officers is 669, and the score of tourists is 861. The tourist, BBSNP-officers, people of Pemerihan and Sumberejo agree towards elephant ecotourism. They believe that it can support elephant conservation, improve people financial support, manage the environment and environmental education. Whereas, the people of Way Haru thinks that ecotourism development does not involve their participation; it is presumably happened because the people of Way Haru got less attention from TNBBS, compared to people in Pemerihan and Sumberejo. Vishwanatha and Chandrashekara (2014: 261) report that in India the positive impact of ecotourism is to improve the appreciation of conservation among local people, government, and other stakeholders; and also to increase the variety of flora and fauna. However, its negative impacts are creating traffic jam, lessening the water quality and decreasing soil nutrient. The low attention of Way Haru people is probably caused by their demanding access to Way Haru. From Sumbersari Beach, the villages area of Way Haru can only be accessed on foot in 5-6 hours or two-wheels-vehicle in 2 hour, which should pass a beach that is prone sea water tide; while if from CEP it will need 8-9 hours walking time. This difficulty causes Way Haru becomes a least visited area and attention from the BBSNP-management, as well as never get ecotourism training. The chi-square test of *positive perception* on elephant ecotourism shows that 8 from 10 pairs of stakeholder combination indicate an *aligned* result (80%); where the pair Way Haru people and BBSNP-officers, as well as people of Way Haru and Pemerihan are in *un-aligned* (Figure 1a and 1b). This is the result of lower perception score given by Way Haru people. While the *negative perception* of all stakeholder towards elephant ecotourism shows that 6 of 10 stakeholder pairs are *significantly different* (Figure 1c and 1d); and the test of Way Haru and its other pair always show *un-aligned*. This different perception is linked to less attention from external party to help and maintain the Way Haru people in avoiding elephant disturbance which leads to their low score of perception.

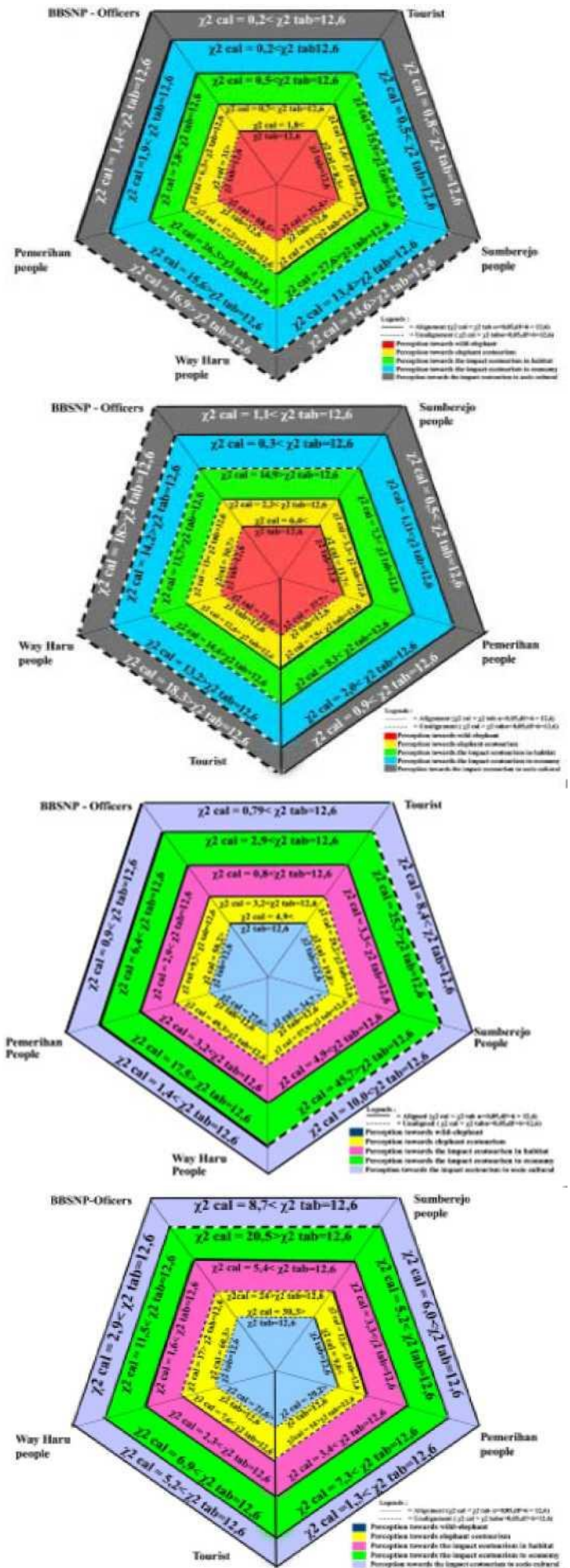


Fig 1: Paired goodness of fit test result of stakeholders' positive perception (1a and 1b) and negative perception

6. The perception of stakeholder towards the impacts of elephant ecotourism in habitat

The perception of stakeholder toward the impact of elephant ecotourism in habitat is important to be assessed in order to find out the anxiety level of the habitat function continuity. The perception of four stakeholder groups show positive scores. Their perception score are 472 for Pemerihan people, 474 for Sumberejo, 550 for BBSNP-officers, 715 for tourists, and -101 for Way Haru people.

The positive scores reveal that the stakeholder see elephant ecotourism in habitat as something promising. They believe that it can make the habitat more forested, have better functions, and is safe from illegal logging. The people of Sumberejo even hope that ecotourism activity can avoid forest cutting-down activity that once happened in Reformation Era (1996-1997); where the damaged forest was caused by illegal logging done by outsiders. They state that when elephant ecotourism development can involve the local people, they can guard the forest from illegal logging.

In relation of ecotourism impact to habitat, Kuvan (2005: 263) states that generally tourism activity is consumptive and it produces waste that can damage the environment in Turkey. Cole in (Buckley, 2004: 41) states that the impact of ecotourism impact in habitat can happen through several ways, such as building the infrastructure and accommodation to support the tourist in American. The making of trail and camping area in the destination or wild animal habitat can also negatively affect the soil and vegetation. The soil will loss its organic horizon, become more dense, which lessen its ability to reproduce vegetation and germination.

The people of Pemerihan state that the forest area will be more fragmented, which makes elephant's rest area decreasing, the people of Sumberejo and Way Haru also believe that the area of elephant's movement can be decreasing too. However, all of them believe that ecotourism activity attract more visitors.

The results of chi-square test on *positive-perception* toward in habitat elephant ecotourism show that only 4 of 10 pairs of stakeholder pairs (40%) answered *not significantly different* (as seen in Figure 1). However, the people of Way Haru show their *un-aligned* (significantly different) result again.

On the other side, the results of chi-square test on *negative perception* show that all stakeholder pairs are *not significantly different* (Figure 1c and 1d). These conditions show that all stakeholder gave a relatively similar answer on the impact in habitat elephant ecotourism. They agree that the negative impacts tend to be minimal and they do not worry that it will lead to lessened habitat function.

According to Gatewood and Cameron (2009: 21), the positive impacts of tourism to the environment in Turks and Caicos Island, USA are improving environmental conservation, increasing protection process toward historical tracks and building, developing sense of ownership toward natural resources, However, its negative impacts are increasing traffic lane, noises, trash and pollution.

7. The perception of stakeholder toward elephant ecotourism impacts to economy

The perception of stakeholder of economy aspects is important to be assessed as an indicator to ensure that there is public welfare improvement affected by elephant ecotourism. The cumulative perception score of Way Haru people is smaller than other stakeholders. Their scores are 734 for Pemerihan people, 799 for Sumberejo people, 684 for BBSNP-officers, and 626 for tourist, while for Way Haru people is - 107.

The people of Way Haru *quite disagree* that ecotourism can expand job vacancy, natural resources values and business

expansion, while the rest 4 stakeholder are *in agreement*. This different perception is probably triggered by the geographical condition of Way Haru which is remote (15 km from village market), where it is also an enclave area with forest and sea in the surrounding. Since the accessibility of traffic is burdened by the tide of sea water, and can only be accessed by motorcycle, it results in limited business traffic, and then influences their perception.

The people of Pemerihan, BBSNP-officers and tourists do not worry about the negative impacts of ecotourism. However, the people of Sumberejo worry that it may lead to family assets sale, and the Way Haru people worry about environmental values, farming production, and assets governance by some people.

The chi-square test of positive perception shows that 6 of 10 stakeholder combination pairs are *aligned* (60%); where is the 40 % of *un-aligned* take a place specifically when Way Haru is paired with other stakeholders (see **Figure 1a and 1b**). The BBSNP-officers and tourists do not worry about the negative impacts of elephant ecotourism to the people's economy.

The chi-square test of negative perception shows that 7 of 10 stakeholder combination pairs are 70% *in aligned*, and 30% *in un-aligned*. This is presumably happened since the BBSNP-officers and tourists have better educational background, compared to the local people, and they consider that the negative impacts to economy aspects will not affect the elephant ecotourism development.

According to Tatoglu (2000: 746), the economy impact of tourism will always get positive responses from the local people in Turkey. It lessens unemployment rate, expands the transportation and communication activities, and increases local people income through tourism activities. Chase *et. al.* (1998: 466) believes that ecotourism is reliable to become an instrument of economy development through government policy innovation and other mechanisms, as done in Costa Rica.

8. The stakeholder perception toward elephant ecotourism impact to socio-cultural aspects

The perception of stakeholder toward elephant ecotourism impact to socio-cultural aspects is important to be discovered as appreciation to the socio-cultural values of certain society. Ap and Crompton (1998: 120) affirm that from socio-cultural point of view, tourism can affect the value systems, individual behaviors, family relationship, lifestyle, moral, and society organization. Both can lead to be positive and negative impacts.

The cumulative perception score of Way Haru people is different compared to other stakeholders. The scores are 762 for Pemerihan people, 901 for Sumberejo, 676 for BBSNP-officers, and 770 for tourists; but the Way Haru people again show negative cumulative score of -146. The positive scores indicate the stakeholders believe that ecotourism can improve the socio-cultural values, while the negative score indicates the stakeholder believe that ecotourism will affect the sociocultural values negatively.

The positive perception tends to be high. The high scores are given since the people have improved their knowledge, social responsibility and cultural appreciation. Mostly, the positive perception are given by 4 stakeholders (Pemerihan and Sumberejo people, BBSNP-officers, and tourists), except Way Haru people who answered *quite disagree to so-so*.

The people of Pemerihan and Sumberejo, tourists and BBSNP-officers tend to give similar score for all negative perceptions, but the people of Way Haru *quite agree* that ecotourism activity can lead to higher consumerism, sexual illness, and tradition disappearance. This anxiety is linked to their strong religion attitude.

The chi-square test of positive perception shows that 6 of 10 stakeholder combination pairs are *in agreement* (60%) and *in*

disagreement (40%); specifically when Way Haru is paired with other stakeholders (see **Figure 1a and 1b**). Whereas the negative perception of 10 stakeholder combination pairs are *in agreement* (**Figure 1c and 1d**). The difference of positive perception happened because the people of Way Haru gave low scores compared to the four other stakeholders; especially in improving knowledge and developing social institution indicators, they answered *quite disagree*.

The low positive perception of Way Haru people is strongly caused by their least interaction with outsiders, limited information flows, and monotonous life. Basically, they spend their life to take care garden, whereas their internal group interaction is merely in funeral events or cooperation activities.

9. People motivation

The motivation of people to support ecotourism passively is forced by their needs to work on the land as source of income. The people of Pemerihan and Sumberejo are motivated to maintain their income, to know the forestry official and visitor better, to learn more about flora fauna existence, and to know the plan of national park development in tourism context. They *agree* about those 5 indicators of motivation. On the other hand, the people of Way Haru are more motivated to learn more about flora fauna existence, and to know the plan of national park development in tourism context. They also want know the elephant existense that often harm their plants, so the information will be needed as anticipation to wild elephant herds.

The people of Way Haru are motivated to know the relationship

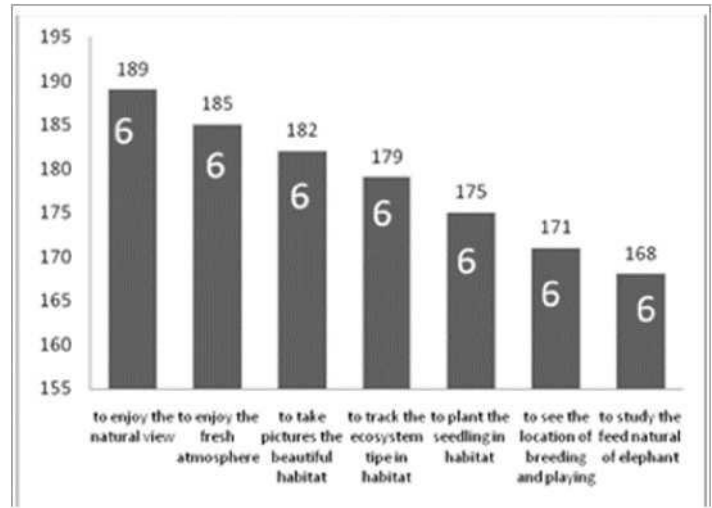


Fig 5 : Cumulative score and average score of tourists' motivation towards elephants' habitat.

of national park development plans and their existence in the forest area. All of them curious to know whether they will be moved or not regarding the ecotourism development and also about their involvement in every tourism activities.

The alignment test of 3 stakeholder group motivation (people of Pemerihan, Sumberejo and Way Haru) in passively supporting ecotourism is *significantly disagree*; Pemerihan vs Sumberejo and Pemerihan Way Haru. While Way Haru - Sumberejo pair is *in aligned* (**Figure 3**). This different perception occurs since the people of

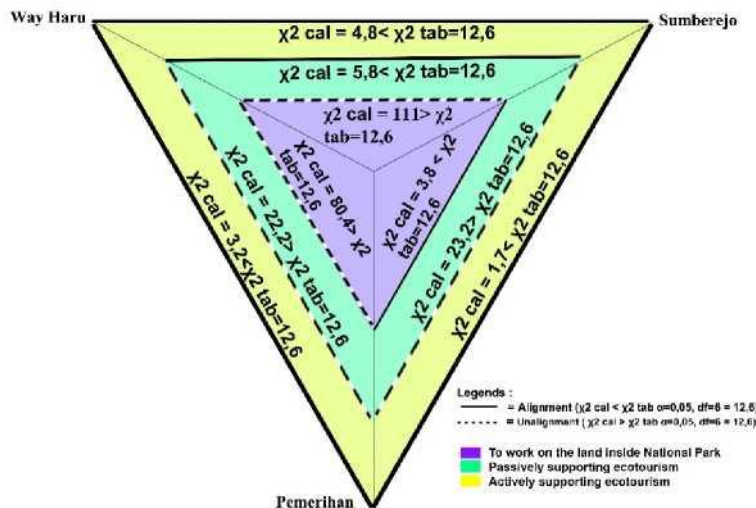


Fig 3: Paired goodness of fit test result of stakeholders' motivation

Pemerihan have got more information and activity program from forestry officer and their working partners. Therefore, their motivation to know them better is higher compared to the motivation of Sumberejo and Way Haru people.

The people motivation to actively support ecotourism is strong. The score of Pemerihan and Sumberejo people is almost similar, and they *agree* about all motivation criteria, namely: improving income, upgrading social status, applying their skills, developing the trade, improving knowledge, and protecting elephant and its habitat.

On the contrary, the people of Way Haru are quite motivated to improve their knowledge and to protect elephant and its habitat (*quite agree*). Their motivation is important to be appreciated, since they generally tend to show lower perception compared to other stakeholders. They consider that elephant ecotourism is a real solution to avoid the elephant harm their land and eat their plants.

The motivation of three stakeholder groups (people of Pemerihan, Sumberejo and Way Haru) is actively supporting ecotourism is high, since all of them give high score. This condition occurred since the people are often disturbed by elephant, which leads to harvest failure; and there were no proper solution to solve it. Then, elephant ecotourism is expected to give them more alternative income source and new business opportunities.

10. Tourist Motivation

Wild elephants in their original habitat are the primary attraction for tourists. It is the highest motivation of tourists, to see the wild elephants in their own habitat. (**Figure 4**). The second motivation is to study wild elephant's behavior. Both motivations get a *high* score, while for the other 5 aspects, the score is *rather high*.

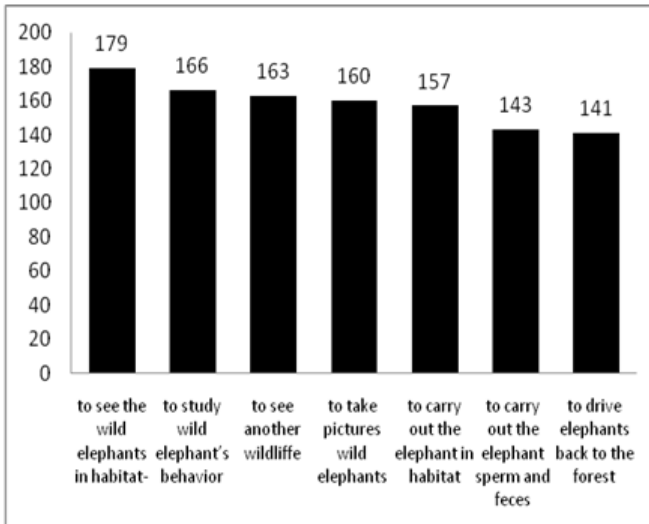


Fig 4: Cumulative score and average score of tourist's motivation to see wild elephants' attraction.

Recently, tourists only see elephants in the zoo or elephant's breeding. The elephants are in cages and fenced or chained. In that condition, the satisfaction and the experience are very different compare to seeing directly the wild elephants in their natural habitat.

To actualize tourist's motivation to see wild elephants, information about wild elephants becomes very important for the elephants' ecotourism manager to have. It becomes part of satisfaction guarantee for tourists and also for the sustainability of the ecotourism.

In the context of elephants' habitat, the highest tourists' motivation directed to the activity of enjoying the natural view, while the second motivation is to enjoy the fresh atmosphere. Tourists agree (score 6) of all ecotourism activity options in elephants' habitat (Figure 5). However, it is important to be remind that according to Kozak (2002:221) motivation reviewed from concept dynamics, may be varied from one person to another, from one market segment to another, from one destination to another, as well as from one decision process to another.

The natural view in elephants' habitat, especially in Pemerihan-Way Haru Resort is very beautiful and varied, starting from the natural forest with its big trees and fauna, clear river, to beautiful beaches with fresh air, they are unique attraction to tourists who come to Pemerihan-Way Haru Resort, BBSNP. Tourists convey that their desire to enjoy natural view and fresh air comes from their saturation of routine and busy activities in the city. To overcome the saturation, they look for a different atmosphere and go to the forest to enjoy natural view and fresh air.

According to Akama and Keiti (2003: in Beh and Bruyere, 2007:1465) primary motivation of tourists in Kenya is to see wild life and local culture. According to Beh and Bruyere (2007:1465), based on 8 factors of motivation, tourists in Kenya were categorized in 3 segments i.e. *Escapists*, *Learners* and *Spiritualists*, *Escapists* are tourists who want to escape

themselves from routine activities and want to feel the adventure in the wild nature. *Learners* are they who want to gain information and knowledge from the national park's staff, such as the history of the national park, specific elements of the flora and fauna. Last, *Spiritualists* are those who come for self-reflection.

11. BBSNP-officers' Motivation

BBSNP-officers' primary motivation of being actively involved in elephants' tourism is to increase knowledge and to conserve elephants' habitat (Figure 6). Various motivations were stated because their routine activities were full with conserving activities only; such as trees planting, wild elephants' expulsions, forest fires extinguishing, arresting poachers, eviction of forest encroachers, as well as local community counseling and education. In their opinion, elephants' tourism will allow them to do different things; such as tourists' service, tourism marketing collaboration with stakeholders, object management, and tourism attraction.

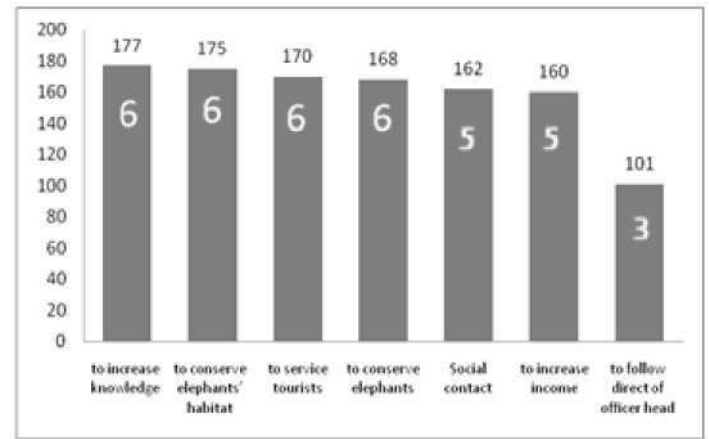


Fig 6: Cumulative score of managers' motivation to be involved in elephants' ecotourism activities.

They believe that all the activities will increase their knowledge and morale in managing the national park. They also believe that ecotourism activities will not only give profit to the national park but also will help conserving the elephants' habitat and population.

According to Osterloh and Frey (2000:538), motivation as a management's subject needs to be managed and have a very important role to find solutions to social dilemmas and can be used by an institution to increase the competence of the employees. It was stated that there are two kinds of work motivation, i.e. *extrinsic work motivations* such as indirect needs fulfilment like financial compensation, and *intrinsic work motivation* such as direct needs fulfilment like satisfaction in doing their activities. *Intrinsic motivation* is based on their duties or the passion in doing their activities, and to see themselves valuable.

12. Inter stakeholders preference

Preference of 5 stakeholders showed un-alignment in wild elephants' management. (Figure 7). Pemerihan people gave a high score in aspect of elephants' expulsion from their lands, report to the officer to be moved and to make them tourism object.

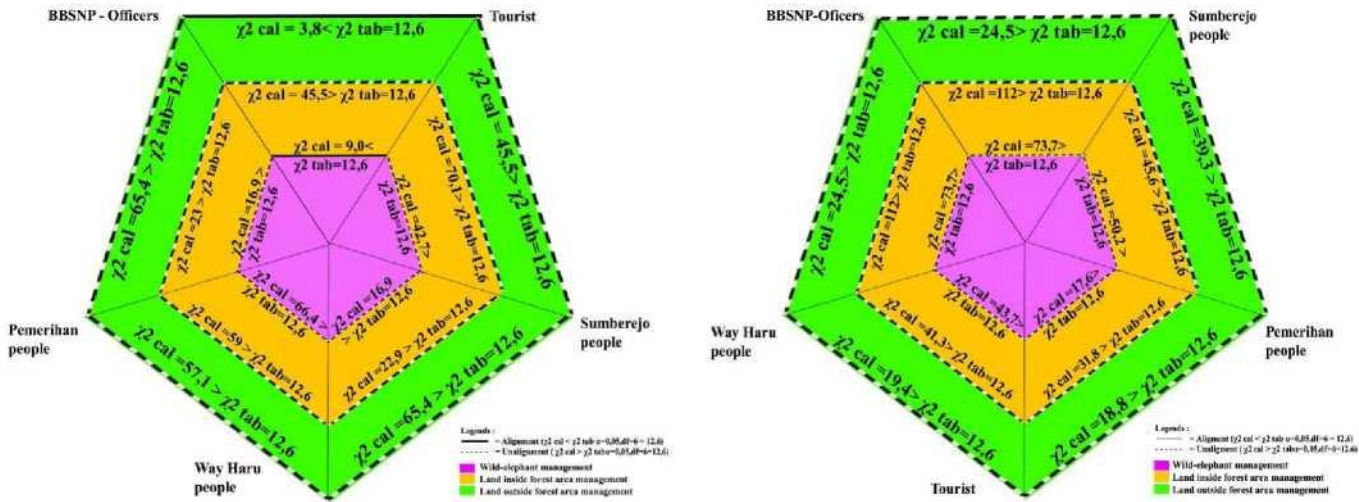


Fig 7: Paired goodness of fit test result of stakeholders' preference

Sumberejo people gave a high score for making wild elephants tourism object and reported to the officer if they enter the villager's land, as well as a high score of Way Haru people. Three community groups always chose elephants ecotourism as one of the alternatives for managing the elephants. However, the primary preference of the BBSNP-officers and tourists for wild elephants which often enters the people's land is to be immediately reported to the forestry officer to be driven back to the forest.

Patterns of action disorder are likely to happen if there is unalignment in the preference of elephants' management. BBSNP-officers stated *strongly disagree* with elephants' trap for wild elephants' which enters the villager's land. While the people of Way Haru and Sumberejo stated *indifferent* (score 4). Preferences of 5 stakeholders to wild elephants' management are significantly different, except between BBSNP-officer and tourists, they are statistically not significantly different or in *aligned*.

Different preference among tourists, BBSNP-officers, and villagers towards wild elephants' management may have occurred because of the difference in the aim of wild elephants' utilization. To the people, wild elephants' management will reduce the risk of having elephants ruin their plants. Wild elephants' management for ecotourism will open work opportunities and increase their income. While for the managers and tourists, the aim of wild elephants' management is to protect and conserve elephants through the mechanism of driving back the elephants from the villagers' land back to the forest.

a. Preference of land inside forest area management

Habitat conservation is threatened when the preference of the habitat's managers are conflicting. The BBSNP-officers, tourists, and Pemerihan villagers gave a high score (6 out of 7 score) for option to replant the land inside forest area which had been uncultivated. The people of Pemerihan, Sumberejo and Way Haru expect to replant the land with farm plants so that it will increase their income. This condition is conflicted with the preference of the BBSNP-officers and tourists, who are strongly disagree to replant this area with farm plants. Preference of 5 stakeholders towards land inside forest area management are significantly different or conflicted. This condition certainly is a challenge in the success of replanting

lands within forest area which had been uncultivated.

Alternative solution is to choose forest trees which have high economic value, such as nutmeg trees (*Myristica inners*) and jaha trees (*Terminalia belirica*). The local community informed that the price of dried nutmeg is 40.000 IDR/kg, while dried nutmeg membrane can reach 140.000 IDR/kg. Jaha seed is commonly consumed by the community and still has economic potential to be sold in the market.

b. Preference of land outside forest area management

An appropriate solution is needed in choosing the plants to grow in the people's land, which is within the home range of the elephants. The preference of people of Pemerihan, Sumberejo and Way Haru towards land outside forest area management is to cultivate more intensively. While the BBSNP-officers and tourists gave score 5 (*rather agree*) to plant forest trees in the land outside the conservation area. Their reason is to decrease *illegal logging* for selling purpose or for villager's houses building purpose from the forest area.

The people, BBSNP-officers, and tourists stated *agree* for building fence to keep their plants from elephants. However, physical fence may not be the perfect choice because elephants are routinely coming to the area, so it will be useless. According to Fernando *et. al.*, (2010:41) electric fence in Sri Lanka as mitigation for conflict between men and elephants without consideration of elephants' movement patterns will cause loss or fragmentation of elephants' habitat.

Goodness of fit test for preferences of 5 stakeholders towards land outside forest area management are significantly different or in un-aligned, except the preference between the BBSNP-officers and tourist which are statistically not significantly different or in aligned. They both expect that the land will become like-forest, comfortable with cool air and beautiful.

13. Community support

The people of Pemerihan, Sumberejo and Way Haru gave the highest score towards security support plan. Managers gave a high score towards guide aspect and volunteering. Sumberejo people *did not support* volunteering activities. Their common motivation is to fulfill basic needs, such as food, house, and security. This condition is in line with Maslow motivation theory that basic needs have to be fulfilled before people can give their attention to higher needs.

Preference of 4 stakeholders towards support plan for ecotourism are significantly different or in un-aligned. The background for the difference in support is BBSNP-officers' mindset which tends to be bureaucratic and mostly submit to their daily SOP only.

14. Perception, motivation, and preference alignment of the stakeholders

The partial analysis of BBSNP-officers' alignment towards their perception, motivation, and preference showed statistically significantly different result, despite of their high score in perception towards ecotourism. They were strongly agree that elephants are protected and endangered species and can be used to be tourist attraction which support environmental education, increase work field, and knowledge and protect habitat from destruction. They even have high motivation to be involved in ecotourism and to conserve the habitat. However, their preference showed that they are *rather disagree* (score 3) to make wild elephants ecotourism object (**Table 4**).

Partial alignment analysis of the tourists also showed significantly different result. Even though tourists' perception gave a *very high* score towards elephants' protection (score 7), ecotourism support conservation education (score 7), and also a high score (score 6) for satisfactory experience and increasing economic value of natural resources, but their priority of elephants' management is not for elephants' ecotourism. They emphasized that wild elephants should be driven back to the forest or reported to the forestry officer.

The goodness of fit test showed significant difference even though their motivation were high to see the elephants in their original habitat, to observe elephants' behavior, to ride the elephants, to join patrol and take pictures with the elephants,

and to enjoy natural view with fresh air. The difference of tourists' preferences may be due to lack of knowledge and awareness about the social and cultural value of elephants' conservation.

A significant difference in the perception, motivation, and preference of the BBSNP-officers and tourists may also influenced by the 'old-fashion' paradigm of conservation which have existed for a long time in Indonesia. In the history, since early 1980s, the pattern of conservation activity in Indonesia is tightly separate the activity of *protection, preservation, and utilization* which are *the conservation trilogy*. The separation in the implementation of the conservation trilogy were not only realized in the typology regulation of the conservation area (such as *protected forest, national park, wildlife sanctuary, protected natural forest, etc.*) and in the form of *zoning system* applied to each typology, but also showed by the limitations of management activities allowed to be applied. Even though at this time there were changes in the paradigm of conservation trilogy in Indonesia, but they are still in the phase of discourse and form searching.

Furthermore, goodness of fit analysis for perception, motivation, and preference of the people showed no significant difference. Their preference showed a firm position, which are to relocate the elephants or to utilize them. If the elephants are utilized for ecotourism, it will increase their income, but if they will not be utilized, then they will be considered as enemy because they ruin their plants and threatened the people's lives. The people of Way Haru, also has no significant difference in perception, motivation, and preference, which is to choose ecotourism to manage wild elephants. To them, the other only choice is to relocate them or report them to the forestry.

Table 4. Resume of alignment of perception, motivation, and preference of each stakeholder

Village	Perception	Motivation	Preference
Pemerihan	<p>Positive perception: Elephant is endangered species and tourism object (score 6), protected (6), tourism supports social and cultural aspect of the local community (6), increase economic value of natural and human resources (6), increase local community income, security (6), conservation of elephants' water source for drinking and wallowing (6).</p> <p>Negative perception: animal which stand in the way in the forest (4), ecotourism cause crowdedness (5), reduce the space for relaxing (4).</p>	<p>Motivation: To maintain current source of income (score 6), to know forestry officers or visitors (6), to protect the elephants (6)</p>	<p>Preference:</p> <p>To relocate elephants (score 7), to make elephants tourism object (6), to build fence on the lands outside the national park (6), to replant the land inside the national park with forest plants (6).</p>
Sumberejo	<p>Positive perception: Elephants to be protected (6), elephants as endangered species and tourism object (6), tourism support conservation education (6), to increase investments in local area (6), to increase appreciation of local culture (7), to conserve area to produce salt (6) Negative perception: animal which stand in the way in the forest (4), ecotourism causes crowdedness (5), family assets trade (4), less area for elephants' movement (4)</p>	<p>Motivation:</p> <p>To gain information about national park development plan (6), to maintain current source of income (6), to add knowledge and friends (6).</p>	<p>Preference: To make elephants tourism object (6), to report wild elephants to the forestry officer (6), to build fence on the land outside the national park (6), to replant land inside the national garden with farm plants (4).</p>
Way Haru	<p>Positive perception: Elephants as alarm of natural disaster (5), animal with charisma, beautiful, strong memory and sensitive (4), tourism with local community (5), to increase investment in local area (4), to increase social responsibility (5), to increase security of the habitat towards potential conflict with men (5). Negative perception: Elephants as animal which often ruin the plants (5), Animal which often attack and disturb human (5), Tourism which not involving the local community (5), reduce the environmental value (5), high consumerism (5), increase the tension in the community (5), reduce the area of the elephants' movement area (5).</p>	<p>Motivation:</p> <p>To gain information about the existence of flora and fauna (5), to protect elephants' habitat (5)</p>	<p>Preference:</p> <p>To make elephants tourism object (5), to relocate elephants (5), to cultivate intensively land outside the national park (5), to replant the land inside national park with mixed plants (4).</p>
Managers	<p>Positive perception:</p> <p>Elephants are endangered species which are protected by the Country (7), endangered species and tourism object (6), ecotourism supports environment education (6), increase work opportunity (6), increase knowledge (6), habitat conservation (6)</p> <p>Negative perception:</p>	<p>Motivation:</p> <p>To increase knowledge (6), and to conserve habitat (6)</p>	<p>Preference: Wild elephants to be reported to the forestry (6), to drive them back to the forest (5), to make them tourism object (3), to become guide and volunteer (5), to plant the land outside national with forests' trees (6), to replant the land inside the national park with forest trees (7).</p>
Tourists	<p>Positive perception:</p> <p>Elephants are protected by the Country (7), animal with charisma, beautiful, strong memory, sensitive (6), ecotourism supports conservation education (7), satisfactory experience (6), to increase economic value of natural and human resource (6), to increase community's knowledge (6), to increase the population of other flora and fauna (6).</p>	<p>Motivation:</p> <p>To see wild elephants in their original habitat (6), to study wild elephants' behavior (6), to ride elephants with mahout (6), To join the patrol and take pictures (6), to enjoy the natural view (6), to enjoy the fresh air (6).</p>	<p>Preference :</p> <p>To report wild elephants to the forestry (6), to drive them back to the forest (5), tourism object (4), to plant the land outside national park with forest trees (5), to replant the land inside national park with forest trees (6).</p>

15. Conclusion

Based on 100 sets of combined stakeholders paired test, it was found that the alignment of stakeholders' perception was only 60%; where the alignment of stakeholders' positive perception was only 56% while the alignment of negative perception was only 64%. The high percentage of un-alignment between stakeholders may be a challenge in the development of elephants' ecotourism in BSSNP.

Negative perception of Way Haru people is always higher compare to the other stakeholders, and this is occurred in every

aspects; elephants' aspect, elephants' ecotourism, impact on the habitat, economy, and social and cultural. The un-alignment of positive and negative perception paired combination involving Way Haru people was 67,5% (27 out of 40 sets), Sumberejo 37,5% (15 out of 40 sets), Pemerihan 32,5% (13 out of 40 sets), BBSNP-officers 32,5% (13 out of 40 sets) and Tourists 30% (12 out of 40 sets). This information is important to be included in compiling the priorities of education activity for the people around BBSNP. Alignment of perception was reached in the aspect of elephant's ecotourism

which expected to support conservation education, good impact on economy with the increase of investment in the local area and social impact with appreciation towards the local people's culture. Those expectations were challenges to be realized by BBSNP- officers.

Alignment of motivation to participate actively in elephants' ecotourism occurred amongst the people of Pemerihan, Sumberejo and Way Haru. This alignment allows the BBSNP managers to involve the local people in elephants' ecotourism development.

The un-alignment of preference occurred in all groups towards the aspect of wild elephants' management and cultivated land (inside as well as outside national park area). The people gave alternatives for elephants' management, which are to be driven back to the forest or to make them ecotourism object, while BBSNP-officers and tourists gave a high score for wild elephants which escaped from the forest to be reported to the officers.

The preference of tourists and BBSNP-officers for cultivated land always directed to replanting forest trees, while the people prefer to replant with mixed plants. The disagreement may become a challenge in the management of wild elephants and land for ecotourism.

Alignment in internal perception, motivation, and preference within each group indicate that the people have agreed more compare to the tourists or BBSNP-officers in the context of ecotourism development. Along with the elephants' behavior which is entering the farm land regularly all year, the people believe that to drive them back to the forest is not the best solution; to them, the idea of developing wild elephants' ecotourism activities in the village area will be able to eliminate the negative impact of elephants' attack to the villages. Wild elephants' ecotourism in their villages were not only believed to give economic benefit but also will eliminate their "isolation" due to geographic isolation and underdevelopment of infrastructure that they have been experiencing.

16. Recommendation

This study should be completed with more study about financial capacity of stakeholders in building collaboration for elephants' ecotourism activities development in TNBBS. This is important so that management collaborative paradigm implied by various approaches of ecotourism development implementation methods can be applied optimally and fair for the local people.

If the investment participation portion of the local people in costing ecotourism development is not optimized, then the bargaining power of the local people will be low. In the dynamics of ongoing development, this weakness will give the chance to overturn perception, motivation, and positive preference they currently have. In time, all of those things will revoke the existence of local people and make ecotourism development lose their primary pillar, which is social-cultural sustainability pillar.

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