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*Research Article*

# The State of Community Knowledge, Attitude, and Intention to Conservation of Wildlife in the Rimbang Baling Wildlife Sanctuary, Riau, Indonesia

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## ABSTRACT

This survey reveals how the community in Rimbang Baling Wildlife Sanctuary in their understanding of positive laws, especially the state regulation, both concern the rule of law and laws related to conservation. In addition, their attitude towards sharia law such as the wildlife fatwa (MUI's Fatwa No 4/2014) is about the protection of endangered wildlife to maintain ecosystem balance. We ask which rules must be obeyed first, the religious regulations, such as fatwas, or government rules? It has been revealed in this study that sharia complied with 20.1% (intervention villages = intervention) and 17.1% (control villages = control), government regulations of 15.3% (intervention), and 10.9% (control), while those who answered that both regulations must be obeyed were of 53.3% (intervention) and 65.1% (control), and the rest answered "don't know". The survey also questioned of hunting and trading of endangered animals prohibited by MUI Fatwa No. 4 of 2014. The respondents were on opinion that agreed and strongly agreed of 57.8% (intervention) and 65.1% (control), disagreed of 22.5% (intervention) and 21.7 (control), while the remainder was neutral, of 15.9% (intervention) and 10.9% (control). The results of relations of attitudes towards wildlife conservation between intentions and the resulting Spearman correlation values were of: p, 389 ** (control) and p, 523 ** (intervention). This means that, for the control villages, the correlation of the two variables is suficien; on the other hand, the correlation in the intervention area has a strong value. The intervention areas, villages: Aur Kuning, Pangkalan Serai, Lubuk Bigau, and Kebun Tinggi, have relatively higher attitudes than the control villages, namely: Gajah Bertalut, Sungai Santi, Terusan, and Tanjung Permai.

**Key words**: awareness, conservation, community fatwa, Rimbang Baling, wildlife

## INTRODUCTION

Conservation success is determined and assessed when there is a change in behavior, be it in attitudes towards nature, reducing consumption levels or changes in policy (Behavior Insight, 2019). The conservation approach taken is an effort in preemptive measures to prevent conflicts between animals and humans (Struebig, *et al*. 2018). Continued conflicts in land management and human interests can lead to threats of extinction and decline in wildlife populations. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES, 2019) reviews 15 thousand scientific reports and reports on global natural conditions on earth, concluding that extinctions that occur in species of creatures on earth are accelerating faster than previous extinctions. The extinction occurred due to rapid land change, overexploitation, and environmental pollution. IPBES calculates that about 1 million plant and animal species are currently threatened with extinction in the last 10 years. This formidable threat is stated, as the first time, this has happened in the history of mankind.

In Indonesia, there has been a decline of wildlife populations, especially the umbrella species such as elephants, tigers, and various other species. The decline in population and threats to Indonesia's biodiversity generally start on three things: habitat loss, illegal hunting followed by illegal trading which leads to criminal acts of theft of forest resources, both due to lack of knowledge, nature. greed, ignorance, and low community awareness around conservation areas (Struebig, *et al*. 2018; Sunarto, *et al*. 2012).

The community involvement in hunting and trafficking of animals generally occurs due to the lack of public understanding of the potential and role of animals in maintaining environmental balance, as well as ignorance of the prohibition of hunting legally protected animals. People are less aware that the decline in wildlife populations and environmental damage will have a negative impact on their lives. Challenges occur when the lack of knowledge is not reached by law enforcement. Therefore, we need innovative and varied ways to tackle and stop hunting and trafficking of animals.

In the context of the environmental movement,

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there are attitudes, beliefs, and norms, which play an important role in changing environmental behavior (Stern, 2002). The existence of these elements is assimilated in religious life, including implementation in socio -cultural elements. One of the important and influential socio-cultural factors is religion; belief in religious teachings has an important role in conservation efforts, including Islam (Palmer & Vinlay, 2003; Bhagwat, *et al*. 2011; Mangunjaya & McKay 2012; McLeod &Palmer 2015).

Indonesia adheres to a unitary state system that is not based on religion, but also a state that applies secular law (Seo 2012). In addition, religious teachings - especially Islam - are considered an important part that cannot be separated in the life of Indonesian society (Risakotta, 2019). Islam also has a moral mission that can be an important vehicle that can be integrated in helping conservation efforts (Mangunjaya *et al*. 2011; Mangunjaya & McKay, 2012; MacKay *et al*., 2014; Mangunjaya & Praharawati, 2019).

This research focuses more on efforts to raise awareness of the hunting of protected animals, namely the Sumatran tiger, pangolin, ivory hornbill, gibbon, and large leaf cica birds in Rimbang Baling Wildlife Sanctuary, Riau, Sumatra. The landscape of the area covers an area of 141,226.25 ha, an increase compared to its initial designation in 1982, which was only 136. In the last five years, this area has been very important as a habitat for the conservation of these animals and become an important concern for the conservation work of the World Wide Fund for Nature (WWF) in engaging with communities in villages around Rimbang Baling. They highlighted the low level of local understanding about the importance of Rimbang Baling biodiversity and the lack of community participation in the conservation of protected animals. The pattern of approach to conservation intentions found in the Rimbang Baling community was through attitudes (26%) (Selni *et al*, 2021), therefore, intervention was needed to see changes in for the better attitude in conservation.

Islam with its rich resources teaches respect and for all sentient being, including wildlife ( Rahman, 2017; Sarwar, et.al,. 2021). To detail advice of how sharia practice can guide Islamic communities, the Indonesian Ulema Council (MUI) issued a fatwa No.4/2014 concerning the protection and preservation of endangered species to maintain the balance of the ecosystem. The aim is to strengthen government policies, guidelines for Muslims, and legal provisions for Muslims. The fatwa is recommended to various groups such as the government, legislative, regional government, business actors, religious leaders, and the community to be socialized (MUI 2014). As an effort to socialize the fatwa to the public, WWF and the National University have carried out socialization efforts in certain villages in Rimbang Baling (Hafidz 2015; and Selni *et al*., 2021). Besides, several studies were conducted on communities in several villages around the Ujung Kulon National Park (Mangunjaya, *et al*. 2018), the people of Aceh (Tjamin, *et al*. 2017).

The reference used in observing the effectiveness of the moral-religious approach in driving the intention to participate in conservation is the design of behavior change theory. According to Ajzen (2011), human behavior can be predicted by Theory of Planned Behavior (TPB). TPB provides an illustration that human behavior can change for the better if it is influenced by several factors. These factors such as attitudes, subjective norms, and perceived behavioral control are as determinants of a person's intention and behavior.

Perceived Behavioral Control (PBC) is an individual's perception of the ease or difficulty of realizing certain behaviors (Ajzen 2005: Ramdhani 2011). PBC is influenced by individual beliefs that are relatively stable in all situations, or can change depending on the situation and the type of behavior to be carried out. PBC is controlled by individual beliefs (control belief strength) that support or inhibit behavior, as well as the role of these resources (power of control factor) in realizing this behavior (Ajzen 2005). In this study, PBC is the belief and role of resources owned by individuals to take action in conserving wildlife in Conservation Areas.

Approaches to this theory are more widely known for predicting individual behavior more specifically. The intention and behavior of individuals are also motivated by education (Azjen and Sexton 1999). The application of this theory has been carried out to analyze the relationship between knowledge and the intention of participating in conservation and protection of animals in the community in Cijalarang Village, Banten, which was found to be quite good (47.2%) (Khairunisyah 2019). This study is useful for measuring the value of knowledge as the basic capital that shapes individuals rationally, awareness, interest, evaluation, trial, and adaptation (Notoatmojo 2012). One of the causes of deviant behavior change is the loss of moral and ethical values in conservation (Alikodra, 2012), and changes in individual or community behavior in a conservation movement can be done through a religious approach that can be integrated into conservation efforts (Mangunjaya 2011; Mufid *et al*. 2014)

This study also explores the subjective norms raised by Ajzen (1991) as an effort to explore the reflection of individual perceptions of social pressure to perform or not perform behavior. Subjective norms are also assumed to be a function of beliefs that specifically someone agrees or disagrees with presenting a behavior. Beliefs that are included in subjective norms are also called normative beliefs. An individual will intend to display a certain behavior if he perceives that other people, who are important in his life, think that he should do that. In addition, subjective norms can mean other important people in this instrument, in addition to the role of people around them, religious leaders who are suspected of being the controllers of subjective norms.

PBC described by Ajzen (2002) shows a degree to which an individual feels that the appearance of a behavior in question is under his control. A person is less likely to form a strong intention or intention to display a certain behavior if he believes that he does not have the resources or opportunity to do so, even though he has a positive attitude, and he believes that other people, who are important to him, will approve of it. PBC can influence behavior directly or indirectly through intention. A direct path from PBC to behavior is expected to arise when there is an alignment between a person's perception of control and actual control over a behavior. For this reason, it is very important in our notes that the preachers will move to socialize the meaning of preaching readiness to preach in inviting the community to take an active role in nature conservation.

This research is a baseline study in villages that were selected as villages to be treated (intervention)

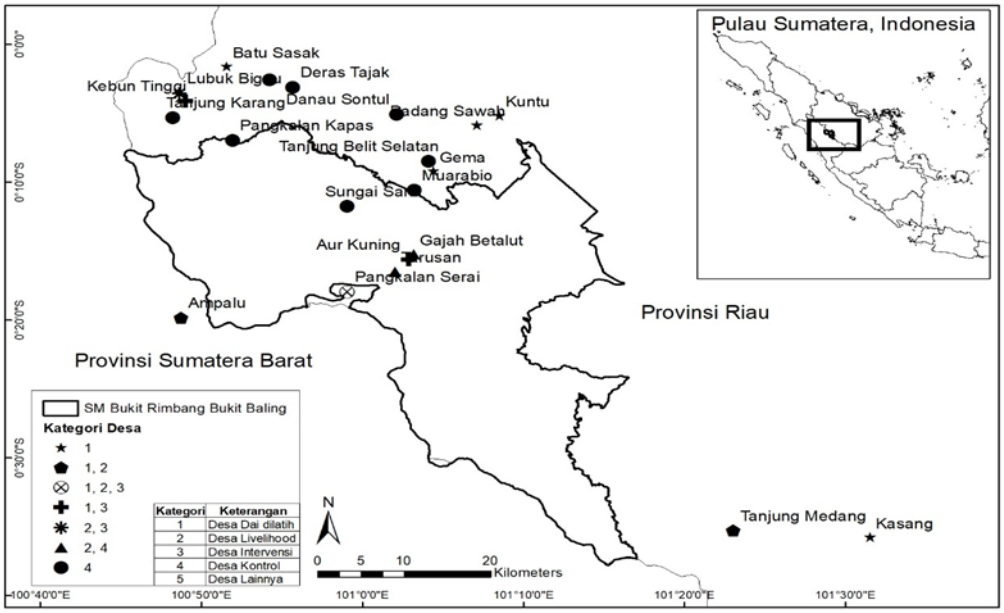


**Figure 1.** Map of Rimbang Baling Wildlife Sanctuary

and villages that were not intervened (as control villages). The survey was intended to obtain an overview of the status of awareness about the MUI's Fatwa and the status of community intentions in conservation and protection of wildlife in Conservation Areas, particularly studies in communities inside and outside the Rimbang Baling Wildlife Sanctuary in Riau, Sumatra. With this study, we hope to conduct and understand the following: (a) mapping the understanding of the MUI's fatwa in preserving wildlife; (b) knowing the level of intention in the community in conserving wildlife; and (c) understanding the relationship between attitude, knowledge, PBC with the intention of taking action to conserve and protect wildlife in conservation areas.

## MATERIALS AND METHODS

### *Study Area*

The research location is in a village located in the Bukit Rimbang Baling Wildlife Santuary, Kampar Kiri Hulu District, Kampar Riau Regency, Sumatra, both inside and outside the area (Figure 1). Rimbang Baling Wildlife Sanctuary has an area of 141,226.25 ha. There are 24 villages included in the Kampar Kiri Hulu District, and all of them are classified as underdeveloped villages (BBKSDA 2017; BPS 2019).

The location design uses BACI (Before, After, Control, Impact) by using purposive sampling criteria by looking at similarities such as: distance of village to area, number of households, fatwa treatment, large mosque for Friday sermons. Data were analyzed by multidimensional (MDS) with <3, mean value, standard deviation. The object was mapping into 2 groups, namely: 4 villages as control and 4 villages as intervention (Smith, *et al*. 1993). The aim is to compare the two groups of control and intervention villages, whether there are differences in understanding and changes in community behavior due to intervention treatment (Smitt *et al*. 1993; Staines *et al*. 2019; Chardon *et al*. 2020; Xingliang 2020; Unlu *et al*. 2020).

### *Data Collections and Analysis*

Action research begins with primary data collection on 10-22 February 2019 using a survey method. Data were input from eight villages as a research study, namely: 4 control villages including Gajah Bertalut Village, Terusan Village, Sungai Santi Village, and Tanjung Permai Village, and 4 intervention villages including Aur Kuning Village, Pangkalan Serai Village, Lubuk Bigau Village, and Kebun Tinggi Village. The number of respondents who participated was around 592 out of 750 households surveyed, consisting of men and women with age criteria: a). <15 years, b). 15-64 years, c)> 65 years.

The sampling technique was carried out, the interviews were open and closed (open ended), equipped with a questionnaire. Statement data were submitted using a Likert scale measurement in the form of ordinal data with a score: 1-5 (strongly disagree, disagree, neutral, agree, totally agree). This ordinal data will be performed non-parametric statistical tests with the Spearman Rank Correlation.

Data analysis was carried out by statistical tests using SPSS 24 on the Spearman correlation test to determine: (1) the level of correlation between the independent variables (knowledge, attitudes, subjective norms, and Perceived Behavioral Control (PBC) on the intention to conserve wildlife in Conservation Areas) with the dependent variable, namely the community's intention to protect wild animals in Conservation Areas (2) seeing the direction of the type of relationship, if the value of the number is positive, it means that the two variables are unidirectional, and (3) seeing the significant relationship between the output variables above, the significance is known.

The variables tested consisted of the dependent variable: intention of wildlife conservation behavior (IN), and independent variables, namely: (a) knowledge of conservation (KN), (b) attitude to behavior (AT) (c) subjective norms (SN), and (d) ) perceived behavior control (PBC). We conducted a survey by providing 19 statement items. Of the 19 items in question, the mean, standard deviation (sd), and total percentage on a Likert scale were produced: "Strongly Disagree" (STS), "Disagree" (TS), "Neutral" (N), "Agree "(S) and" Strongly Agree "(SS) were given to the community in the intervention villages on each question. In data

processing, the mean (mean), standard deviation (sd), and total percentage were carried out by means of accumulation between "STS + TS" and "SS + S" given by the respondents in each statement.

## RESULT AND DISCUSSION

The total number of respondents whose data can be analyzed is as shown in Table 1 as follows: (1) Intervention Village (n = 334), Control Village (n = 258) with a total number of respondents n = 592. In general, in the intervention village, male respondents (44.0%) and female respondents (56.0%). With age <15 years (0.6%), age 15 -64 years (94.3%), and age> 65 (5.1%). More than half of the respondents received primary school education (53.0%), the rest were junior high school (13.5%), high school (13.2%), and university (7.8%,) and never attended school (12.6%). Jobs are dominated by farmers (62.9%), of the 399 respondents are farmers, the rest are private (2.7%), civil servants (1.8%), teachers (3.3%), housewives (20.7%) , traders (3.6%), and entrepreneurs (4.5%,) and student (0.6).

Regarding the number of respondents in each village, for the control village group, the highest number started from Gajah Bertalut Village (36%), followed by Terusan Village (28.7%), Tanjung Permai (26%), and Sungai Santi (9.3%). Respondents from Terusan Village were 28.7% of the 74 respondents who participated and filled out the questionnaire, whereas, according to the village secretary's report, Terusan Village had 108 heads of family from the 4 surveyed hamlets. Around 29 family heads had moved but did not report, and their houses were locked. Likewise, for respondents from Tanjung Permai village, the respondent data provided from the Tanjung Permai village secretary, Mr Firdaus, were a percentage of 26% or 67 respondents who participated from 78 family heads. Whereas, the number of respondents in each village, for the intervention village group, the highest number started from Aur kuning village (38.6%), followed by Kebun Tinggi Village (25.1%), Pangkalan Serai (23.1%), and Lubuk Bigau (13 , 2%).

The education of respondents in control villages was that of 74.0% (n = 191) of the 258 respondents graduated from elementary school (SD), while in the intervention village, only 53.0% (n = 177) of the total 334 population graduated from elementary school. In general, the two groups of community respondent villages were dominated by SD education. Although the number of respondents is different, if the average is taken, the education of the two groups is still equal, namely above 50% of elementary school graduates.

**Table 1.** Demographic profile of respondents in control and intervention villages

| Categories | Village name | Control villages | | Treatment villages | |
|---|---|---|---|---|---|
| | | Frequency | % | Frequency | % |
| Village | 1. Gajah Bertalut | 93 | 36 | | |
| | 2. Terusan | 74 | 28,7 | | |
| | 3. Sungai santi | 24 | 9,3 | | |
| | 4. Tanjung Permai | 67 | 26 | | |
| | 5. Aur Kuning | | | 129 | 38,6 |
| | 6. Pangkalan Serai | | | 77 | 23,1 |
| | 7. Lubuk Bigau | | | 44 | 13,2 |
| | 8. Kebun Tinggi | | | 84 | 25,1 |
| Total Respondents | | 258 | 43 | 334 | 56,4 |
| Gender | Male | 116 | 45,0 | 147 | 44,0 |
| | Female | 142 | 55.0 | 187 | 56.0 |
| Age | <15 Year | | | 2 | 0,6 |
| | 15-64 year | 242 | 93,8 | 315 | 94,3 |
| | > 65 year | 16 | 6,2 | 17 | 5.1 |
| Education | Primary school | 191 | 74,0 | 177 | 53,0 |
| | Junior high school | 22 | 8,5 | 45 | 13,5 |
| | Senior High School | 19 | 7.4 | 44 | 13,2 |
| | University | 13 | 5 | 26 | 7,8 |
| | No school | 13 | 5 | 42 | 12,6 |
| Main job | Farming | 189 | 73,3 | 210 | 62,9 |
| | Private Employment | 4 | 1,6 | 9 | 2,7 |
| | Civil servants | 3 | 1.2 | 6 | 1,8 |
| | Teacher | 7 | 2,7 | 11 | 3,3 |
| | Housewife | 41 | 15,9 | 69 | 20,7 |
| | Student | 6 | 2,3 | 2 | 0,6 |
| | Enterpraneur | 6 | 2.3 | 15 | 4,5 |
| | Trader | 7 | 2.7 | 12 | 3,6 |
| Household | Adult man | 138 | 53,5 | 133 | 39.8 |
| | Adult woman | 118 | 45.7 | 181 | 54.2 |
| | Female Children | 1 | 0,4 | 11 | 3,3 |
| | Male Children | 1 | 0.4 | 9 | 2,7 |

Respondents' occupations in both control villages and intervention villages were dominated by farmers, with more women than men. Most women work as housewives, namely in the control (15.9%) and intervention (20.7%) villages, so when the survey was conducted, more housewives responded to participate. Meanwhile, more men went to farm or pressed rubber.

***Compliance with Fatwa (Sharia) and State Law***

Indonesia is a country with the largest Muslim population in the world and believes that religion has an important role in life and in the implementation of religious law (Islam). This study reveals that more than part of the community sees the two rules of law as equally important: 53.3% (intervention) and 65.1% (control). Those who tend to sharia law answered were of 20.1% (intervention) and 17.1% (control), while those who considered it important to obey government regulations were 15.3% (intervention) and 10.9% (control), and the rest answered "don't know" (Figure 2).

The Rimbang Baling community is a Minangkabau ethnic diaspora who very closely upholds the commands of Islamic teachings. After all, like other Indonesians, this area is also inhabited by people from various tribes, in addition to the Malays and Banjar tribes. This survey reveals the importance of respondents' understanding of positive laws, especially those made by the state, both concerning laws and regulations and laws related to conservation. Looking at the choice of law, it is very important to provide an understanding of the relationship between state laws and support with sharia law such as Fatwa No. 4/2014 concerning the Protection of Endangered Animals to maintain the balance of the ecosystem.

The survey also provides statements regarding the attitude towards hunting and wildlife trade that are prohibited by the MUI's Fatwa No. 4 of 2014. More respondents who answered agree, especially people in the control village 58.1% higher than the intervention village. On the other hand, more intervention villages answered strongly disagree, disagree, neutral, but respondents who strongly agreed with intervention villages were higher. (Figure 3).

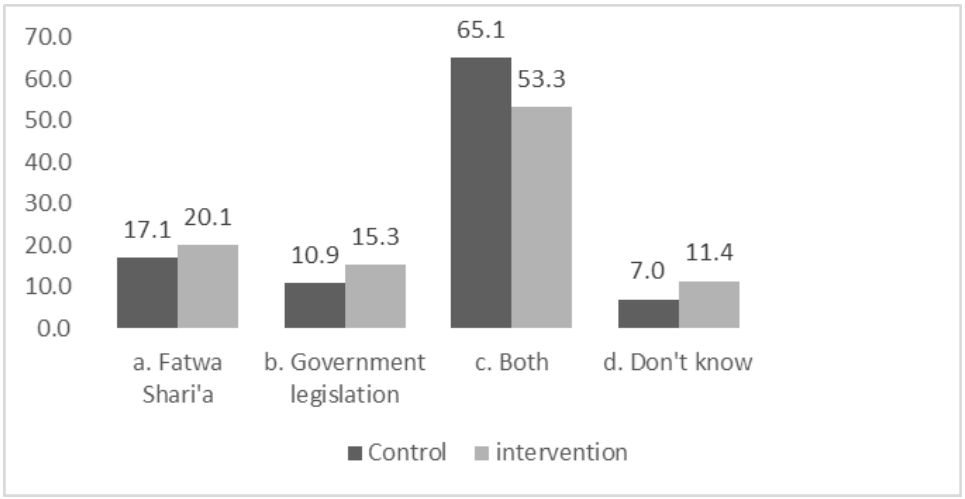


**Figure 2.** Understanding and government law

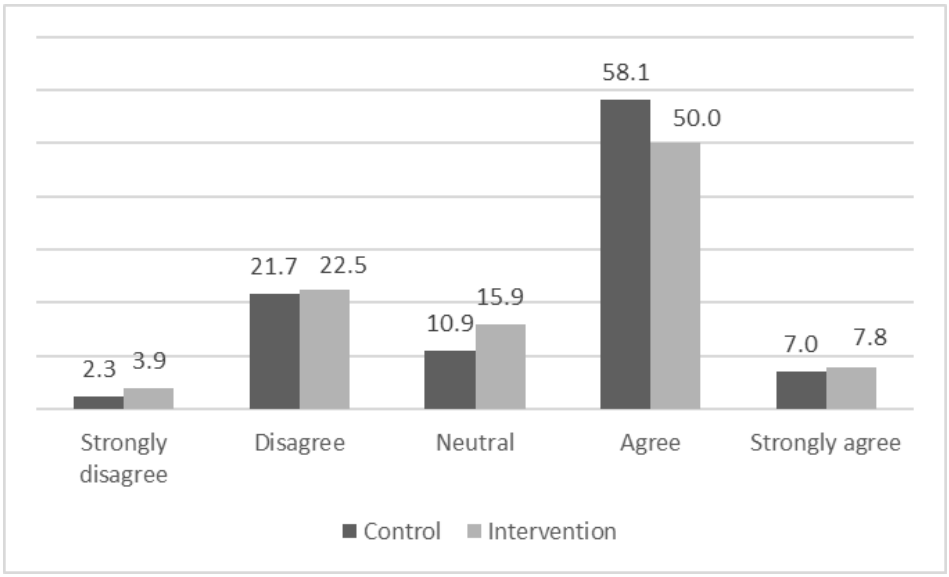


**Figure 3.** Respondents' knowledge about hunting prohibitions and ilegal wildlife trade according to the MUI's Fatwa No.4 / 2014

***Intention of the Community in Wildlife Conservation***

This survey enumerates knowledge-attitude-practice (KAP) intention and perceived behavioral control (PBC) in 19 statement items as baseline data by obtaining comparability (between control villages and intervention villages) in the form of mean scores, standard deviations, and percentage of knowledge (KN), attitudes (AT), subjective norms (SN), perceived behavioral control (PBC), and intention (IN) of the Rimbang Baling community (Table 2), and the percentage was obtained categorically as in Table 3. In the intention to conserve wildlife, control villages and Interventions have a high category (63 to 89%), especially those intending to take part in protecting forests (IN1), participating in preserving wildlife (IN2), and will encourage conserving wildlife (IN 3).

If we look at the response scores of the respondents in general, it is found that the attitudes of the people in the two villages are in the high category, except for attitudes towards wildlife which are related to the statement that: wildlife has nothing to do with my welfare (AT1), it does not get any response from the community, likewise, their attitudes towards efforts to conserve wildlife, such as tigers, that needs to be conserved for future generations (AT3) did not get a good response in the control villages (≤ 52%) and received moderate scores (53 to 62%) in the intervention villages. Like PBC, both types of villages had high scores (63 to 89%).

As for knowledge, each category received a very good knowledge score (63 to 89%) in response to, especially, illegal logging, which is the main cause of habitat destruction for wild animals such as tigers (KN2). Rimbang Baling is an important area for tigers, sun bears, pangolins, primates, or birds (KN3). Tigers are protected wildlife (KN4). Meanwhile, the knowledge for the tiger population in both places has less knowledge (≤ 52%). As for the subjective norm, the community gave a high response about the intention to conserve forests (SN1), and important people at their surrounding will be agreed if they participate in wildlife conservation (SN2). Besides, getting a low category for the control village and very least for the intervention village (≤ 52%).

**Table 2.** Knowlegde attitute practice (KAP) statement

| | |
|---|---|
| **Knowledge Statement** | |
| KN1 | The number of tigers is currently more than 10 years ago |
| KN2 | Illegal logging is a major cause of damage to wildlife habitat such as tigers |
| KN3 | Wildlife SantuaryRimbang Baling is important area for tiger/sun bear/ pangolin / primate / bird habitat |
| KN4 | Tigers are protected species |
| KN5 | Hunting and illegal wildlife trade is prohibited by MUI's fatwa No.4/2014 |
| **Attitude Statement** | |
| AT1 | Wildlife has nothing to do with the welfare of my life |
| AT2 | Participating in wildlife conservation will make my life better |
| AT3 | Wildlife, such as tigers, needs to be conserved for generations to come |
| AT4 | Conservation efforts need to be done to prevent the extinction of tigers |
| AT5 | I am afraid of tigers |
| **Behavior Statement** | |
| PBC1 | I can participate in protecting the forest |
| PBC2 | My personal actions will not have a far-reaching impact on forest conservation issues |
| PBC3 | The decision to participate in wildlife conservation depends entirely on me |
| **Intention Statement** | |
| IN1 | I intend to take part in protecting the forest |
| IN2 | I intend to participate in the preservation of wildlife |
| IN3 | I will encourage conservation of wildlife |
| **Subjective Norm** | |
| SN1 | Most residents in my village will intend to preserve the forest |
| SN2 | Most people, who are important in my life, agree that I participate in the preservation of wildlife |
| SN3 | Religious leaders in my village encourage the preservation of wildlife |
| SN4 | In your opinion, which rules are obeyed in daily life first. Are religious sharia such as fatwas or government legislation?<br>a. Fatwa Sharia<br>b. Government legislation<br>c. Both<br>d. Don't know |
| SN5 | In your view, who is more influential in carrying out your life?<br>a. The President of the Republic of Indonesia<br>b. Regional government<br>c. Ustadz/ulama<br>d. Family<br>e. Others |

**Table 3.** Category of awareness of the value of KAP in society

| Variable | Code | Mean response (%) Control | Mean response (%) Interven-tion | Note |
|---|---|---|---|---|
| Attitude | AT1 | ≤ 52 | ≤ 52 | This attitude has not been responded to by the public |
| | AT2 | 63 to 89 | 63 to 89 | The community has a high concern response |
| | AT3 | ≤ 52 | 53 to 62 | The attitude of concern is less and moderate |
| | AT4 | 63 to 89 | 63 to 89 | The community has a high concern response |
| | AT5 | 63 to 89 | 63 to 89 | The community has a high concern response |
| Intention | IN1 | 63 to 89 | 63 to 89 | The community has a high intention response |
| | IN2 | 63 to 89 | 63 to 89 | The community has a high Intention response |
| | IN3 | 63 to 89 | 63 to 89 | The community has a high intention response |
| Perceived Behav-ior Control | PBC1 | 63 to 89 | 63 to 89 | The community has a high behavioral control response |
| | PBC2 | 63 to 89 | 63 to 89 | The community has a high behavioral control response |
| | PBP | 63 to 89 | 63 to 89 | The community has a high behavioral control response |
| Knowledge | KN1 | ≤ 52 | ≤ 52 | Knowledge is still not good |
| | KN2 | 63 to 89 | 63 to 89 | Knowledge is very good |
| | KN3 | 63 to 89 | 63 to 89 | Knowledge is very good |
| | KN4 | 63 to 89 | 63 to 89 | Knowledge is very good |
| | KN5 | 63 to 89 | 63 to 89 | Knowledge is very good |
| Subjective norm | SN1 | 63 to 89 | 63 to 89 | Understanding of norms is very good |
| | SN2 | 63 to 89 | 63 to 89 | Understanding of norms is very good |
| | SN3 | 53 to 62 | ≤ 52 | Less-moderate understanding of norms |

***Attitudes, Knowledge, and Behavior for Conservation Action***

Based on the results of the correlation test in Table 4, which refers to four variables, namely: attitude, PBC, knowledge, and subjective norms, it shows that there is a positive and significant correlation to conservation intentions in both the control village group and the intervention village group, with a significant correlation at the test level of 1%. This means that all variables are correlated with intention. Whereas, in table 5 is the recapitulation of the results of the analysis of the differentiating factors in the control village and the intervention village, that there is no difference, both of which show significant results at the test level of 1%. This means that the community's intention in both control and intervention villages has a positive attitude in conservation action efforts. This gives a good sign to everything related to the attitudes, knowledge, and subjective norms that exist in the community of the eight villages.

***Attitude toward intention for conservation***

Attitude variables provide clues about: wildlife has nothing to do with the welfare of my life (this attitude is not responded to by the community with a score of ≤ 52%), which reflects low attitudes towards wildlife in both places (control and intervention), then the attitude of participating in conservation wildlife will make life better, get a high response (89%), wildlife such as tigers needs to be preserved for future generations is also high (89%), and the community gives a high attitude (89%) on conservation efforts need to be done to prevent the extinction of the tiger, sun bear, pangolin, primate, or bird, as well as the attitude of the community to fear tigers. The results of the test on the relationship between attitudes towards animal conservation and intention showed that in the control village, the value was suficien (p, 389 **) and the intervention was strong (p, 523 **). The intervention areas, villages: Aur Kuning, Pangkalan Serai, Lubuk Bigau, and Kebun Tinggi, had relatively higher attitudes than the controls, namely the villages: Gajah Bertalut, Sungai Santi, Terusan, and Tanjung Permai.

***Knowledge toward intention for conservation***

Knowledge variable is a variable that we generally ask the community about their understanding of the number of tigers, about illegal logging, which is the main cause of habitat destruction for wildlife such as tigers, the existence of Rimbang Baling Wildlife Santuary as an important area for tigers, sun bears, pangolins,

**Table 4.** Spearman correlation test (Spearman ρ) for KAP in control and intervention villages

| Test | Rho(ρ) Control | Rho(ρ) Inter-vention | Note |
|---|---|---|---|
| Attitude VS Intention | **0.389**** | **0.523**** | Correlated and significant |
| Perceived Behavior Contrl vs Intention | **0.402**** | **0.321**** | Correlated and significant |
| Knowledge vs Intention | **0.394**** | **0.514**** | Correlated and significant |
| Subjective norm vs Intension | **0.398**** | **0.404**** | Correlated and significant |

note **= significant at 1%. N control=258 N intervention= 334

**Table 5.** The recapitulation of the ANOVA analysis of differentiating factors on conservation intention in the control and intervention villages

| *Variable* | *Mean Square* | | *F Value* | | *Sig.* |
|---|---|---|---|---|---|
| | Control | Intervention | Control | Intervention | |
| Attitude | 6.384 | 5.488 | 5.893 | 15.951 | 0.000 |
| PBC | 2.188 | 3.035 | 6.733 | 7.310 | 0.000 |
| Knowledge | 7.147 | 6.822 | 7.278 | 14.373 | 0.000 |
| Subjective norm | 3.001 | 3.238 | 6.896 | 15.615 | 0.000 |

primates, or birds. Besides, tigers are protected wildlife. Hunting and trafficking of animals is prohibited by the MUI's fatwa No.4 / 2014. The results of the knowledge variable test with the intention of the Spearman correlation test are positively and significantly correlated with p, 394 ** for the control village, which means suficien correlated, while for the intervention village, it has a value p, 514 **, which means that the meaning is strong correlated. The control village and the intervention village have a slight difference in the knowledge of the community, namely at the suficien and strong levels.

As for knowledge, related to the number of tigers currently compared to 10 years ago (KN1), it also does not get a good response from the community. The community do not know the tiger population which has continued to decline in the last decade. Their answers may reflect their knowledge of the tiger population as a wild animal as a whole.

***Subjective norm toward intention to conservation***

Subjective norms were raised by Ajzen (1991) as an effort to explore the reflection of individual perceptions of social pressure to perform or not perform behavior, including the response of the community in the village who intend to conserve the forest, as well as the influence of people who are considered important to agree, if they participate in wildlife conservation. This includes encouragement from religious leaders, traditional leaders, or those who are influential in the village were involved in promoting wildlife conservation.

The results of the subjective norm variable test with the intention of the Spearman correlation test were positively and significantly correlated with p. 394 ** for the control village, which was significantly suficien correlated, while for the intervention village, it had a p value, 404 **, which means that the meaning was suficien. This indication also provides a strong signal about the subjective influence of the activities of family and loved ones who can encourage their participation in actively encouraging conservation efforts.

The two communities in the eight villages, both intervention and control, indicated that they had suficien and strong pressure in following the directions of encouragement from those around them, including religious leaders who encouraged the emergence of an intention to conserve the forest.

The people in the Rimbang Baling Wildlife Santuary are exclusively dependent on rubber farming and other income from natural and forest products. Their economic conditions at the end of 2018, deteriorated further due to the decline in rubber prices. As a result, the community becomes very dependent on forest products, such as illegal logging and hunting to make ends meet. Community involvement in hunting and trafficking of animals generally occurs due to the lack of understanding of the community about the potential and role of animals in maintaining environmental balance, as well as ignorance of the prohibition of hunting legally protected animals. People do not realize that the decline in wildlife populations and environmental damage will have a negative impact on their lives. Several studies have shown that ecological behavior is also influenced by knowledge about the environment, in addition to attitudes and intentions to behave in a pro-environmental manner.

***PBC and intention to take conservation action***

Perceive Behavior Control (PBC) variable is a behavioral control which, when combined with intention, can be used to predict behavior. PBC statement raised includes: readiness to participate in protecting forests. Exploring respondents' perceptions of the role that has a broad impact on forest conservation and their personal decisions to agree to wildlife conservation actions. The PBC test results that led to readiness to participate in protecting forests and conservation intentions resulted in suficien correlation values for control villages (p, 402 **) and suficien for villages to be treated with intervention (p, 321 **). This means that an increase is needed

for the intervention village because there are relatively no differences in the intention to behave for conservation.

## CONCLUSION

In general, for the relationship between attitude, knowledge, perceived behavior control (PBC) with the intention to take conservation action, there is a positive and significant correlation with conservation intentions both in the control village group and in the intervention village group, so there is no difference between the control village and the intervention village. In both types of villages, they have a positive attitude towards conservation action efforts. This gives a good sign everything related to the attitudes, knowledge, and subjective norms that exist in the community in the eight villages. Mean while, in the attitude towards the intention to do conservation, it is illustrated that there is less response from the community in both places (control and intervention). Both types of villages have a positive attitude towards wildlife conservation efforts that will make their lives better. In addition, he considers it important that wildlife, such as tigers, need to be preserved for generations to come. The community also gives a high attitude (89%) to conservation efforts that need to be done to prevent the extinction of tigers, sun bears, pangolins, primates, or birds. As in general, people have an attitude of being afraid of tigers. The results of the test on the relationship between attitudes towards animal conservation and intention showed that the community in the control village had a suficien value (p, 389 **) compared to the community in the intervention village with strong value (p, 523 **). Therefore, for the intervention villages, such as Aur Kuning, Pangkalan Serai, Lubuk Bigau, and Kebun Tinggi villages, they had relatively higher intentions and attitudes towards conservation behavior than the control villages: Gajah Bertalut Village, Sungai Santi, Terusan, and Tanjung Permai. At the level of knowledge between the control village and the intervention village, the community had a slight difference in knowledge, namely at the suficien and strong levels.

On subjective norms with intentions besides being positively and significantly correlated, the control villages were suficien compared to the intervention villages. This indication also provides a strong signal about the subjective influence of the activities of family and loved ones who can encourage their participation in actively encouraging conservation efforts, as well as the influence of people who are considered important to them and agree if they participate in wildlife conservation. This includes encouragement from religious leaders, traditional leaders, or those who are influential in the village, involved in promoting wildlife conservation. However, in the communities in eight villages, both intervention and control, indicated that they had weak and moderate pressure in following the directions of encouragement from those around them, including religious leaders who encouraged the emergence of an intention to conserve the forest.

Prediction of action to behave can be predicted by combining the variable of perceived behavioral control (PBC) with intention. In this survey, it was illustrated that the PBC statement that was raised among them was: readiness to be able to participate in protecting forests. The PBC test results that showed readiness to participate in protecting forests and conservation intentions resulted in a strong correlation value for the control villages, but suficien for the intervention villages. Or in other words, there is relatively no difference in the action for intervention village compared to that of the control.

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