



## Human Orangutan Conflict in Sentap Kancang Landscape, Ketapang District

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### **Abstract**

One of the challenges of orangutan conservation lies in the increasing interaction between humans and orangutans which leads to conflict. This research aims to map areas of human-orangutan conflict in the Sentap Kancang Landscape, identify conflicts and losses due to human-orangutan conflict that occur in the Sentap Kancang Landscape, and evaluate the number of human-orangutan conflicts in the Sentap Kancang Landscape. The research was carried out in March-June 2022 in the Sentap Kancang Landscape using triangulation techniques are in-depth interviews, moderate participant observation, and a literature study. Based on field observations and interviews, it was found that 5 villages in the Sentap Kancang Landscape are areas prone to human-orangutan conflict are the villages of Sungai Awan Kiri, Tanjungpura, Mayak, Tempurukan, and Sungai Putri. As a result of the human-orangutan conflict, there are two groups, (1) groups who had a negative view of the existence of orangutans, and (2) groups who experienced financial losses due to crops being damaged by orangutans. Conflicts tended to increase after forest and land fires in 2015 and occurred again with the same pattern in 2019. This shows that mitigating human-orangutan conflict must also be in line with mitigating forest and land fires. There needs to be efforts to increase the security of community fields to avoid possible disturbances by orangutans. Socialization regarding orangutan conservation and protecting their habitat needs to continue to preserve orangutans and forests. Besides, there needs to be an open discussion between the government and affected communities to produce solution actions for communities who have experienced losses due to conflict with orangutans by involving non-governmental institutions that potential to become partners in resolving human-orangutan conflict problems.

**Keywords:** *Orangutan; Conflict; Sentap Kancang Landscape*

### **Introduction**

The challenge in orangutan conservation lies in the increasing level of interaction between humans and orangutans, which ends in the emergence of conflict. Wild animal and human conflict is any interaction between humans and wild animals that has a negative impact on human social, economic, cultural, and on the conservation of wild animals and/or the environment. The increase in human population and the expansion of development encroaching on the territory have caused forest conflicts to occur more frequently, considering that the majority of the orangutan population is outside protected areas. Conflicts between orangutans and humans vary greatly based on the location where the conflict occurs. Conflicts caused by human behavior include destruction and pollution of natural resources, habitat conversion for agriculture, competition for natural resources, hunting, and trade as pets (Hockings & Humle, 2010). Suciadi (2018) wrote a report entitled Rapid Assessment Report on Orangutan Population, Biodiversity, Vegetation and Peat Depth PT. Mohairson Pawan Khatulistiwa (MPK) in the Sungai Putri (Sentap Kancang) Forest Block, Ketapang, West Kalimantan, released by IAR Indonesia in 2018, shows the average density of the orangutan population in the concession of PT MPK is between 2.14-3.17 individuals/km<sup>2</sup> or an estimated population of 813-1,204 orangutans. This

density value is down from the previous density found in the Sungai Putri Forest block with an average density of 2.27 orangutans/km<sup>2</sup> and the number of orangutan individuals is estimated to be between 900-1,250 individuals (Atmoko, et al., 2017). This is a very large orangutan population and is important for the survival of orangutans within the Ketapang landscape. The population of 900-1,250 individuals is the largest orangutan population in Ketapang Regency, the third largest in West Kalimantan Province after Gunung Palung and Betung Kerihun National Parks, and also one of the largest orangutan populations outside protected areas throughout Indonesia.

Orangutans are one of the great apes that still survive in Southeast Asia. Orangutans are in the critical/critically endangered category on the IUCN red list (2021), meanwhile, CITES (Convention on International Trade in Endangered Species of Wild Flora and Fauna) has categorized orangutans in the Appendix I group. Forest Areas Sentap Kancang is one of the habitats of the Kalimantan Orangutan (*Pongo pygmaeus*). This landscape, which stretches across three sub-districts, has land status as a production forest (HP) which is vulnerable to becoming a conflict area. Communities in the Sentap Kancang Landscape that live and carry out agricultural activities such as plantations, animal husbandry, and fishing are very at risk of human-orangutan conflict. Several cases of human-orangutan conflict caused by the introduction of orangutans into community plantation areas have even resulted in financial losses. This occurs due to reduced food sources and the destruction of orangutan habitat until they enter plantation areas and community settlements.

Yayasan Inisiasi Alam Rehabilitasi Indonesia (YIARI) is a non-profit organization working in the field of welfare, protection, and preservation of wild animals in Indonesia. YIARI has a special division to handle conflict between orangutans and humans, known as the Orangutan Protection Unit (OPU) Division. According to the OPU Division, the conflict lasted from September 2019 to December 2019. This conflict occurred after the forest and land fires that hit in August 2019. Report from Mongabay (2020), on January 24, 2020, YIARI together with the Wildlife Rescue Unit of the Kalimantan Natural Resources Conservation Center West Ketapang Region I Conservation Section rescued one adult orangutan that was evacuated not far from the mining area. The team also found an illegal logging location close to the location, namely Hamlet 4, Sungai Pelang Village, Matan Hilir Selatan District, Ketapang Regency. The joint team also evacuated two individual orangutans in a resident's field on Jalan Ketapang-Tanjungpura kilometer 9, Sungai Awan Kiri Village, Muara Pawan District, Ketapang Regency on January 13, 2020.

Reporting written by Mongabay (2020), there are more than 70% of the Kalimantan Orangutan (*Pongo pygmaeus*) population lives outside conservation areas so they often encounter communities with the potential for conflict. The lack of habitat for orangutans is the main trigger for conflicts with humans. Yunowo (2007) in the book *Technical Guidelines for Handling Human-Orangutan Conflict in and Around Palm Oil Plantations*, it explains the causes of habitat loss and drastic decline in orangutan populations due to (1) forest conversion, (2) forest fires, (3) forest logging (whether carried out legally or illegal), and (4) infrastructure development. Sources of disturbance to forests in several locations are also caused by Subsistence crop farming, plantations and extractive industries such as mining are quite significant in contributing to the reduction of natural forest area. Loss of habitat, destruction of natural resources, and competition for resources can disrupt the daily activities and movement patterns of orangutans, which ultimately leads to overlapping ranges between orangutans. Based on this, it is very important to take action to mitigate conflict between humans and orangutans. Conflict mitigation can be both preventive and curative. Preventive measures are always recommended because they can prevent disturbances caused by orangutans, while curative measures are to resolve problems caused by orangutan disturbances.

## Methods

This research was carried out in Sungai Awan Kiri Village, Tanjungpura Village, Mayak Village, Tempurukan Village, and Sungai Putri Village. Primary and secondary data collection, data processing, and writing up research results were carried out from March to July 2022. The tools used were GPS (*Global Positioning System*), ODK (*One Data Kit*) Collect, voice recorder, and camera. The research subjects were people who had been in conflict at the research location in the Sentap Kancang Landscape, the Orangutan Protection Unit (OPU) of Yayasan Inisiasi Alam Rehabilitasi Indonesia (YIARI), and the Wildlife Rescue Unit of Natural Resources Conservation Center (BKSDA) West Kalimantan-Regional Work Section I (SKW I) Ketapang Team.

Research data consists of primary data and secondary data. Data collection was using in-depth interviews, moderate participant observation, and a literature study. Primary data consists of the results of interviews with respondents, the results of observations in community field, and data on the coordinates of orangutan discovery and the occurrence of conflicts. Secondary data is data on the number of conflicts from YIARI and the results of literature studies. All data obtained was processed and analyzed descriptively statistically and explained descriptively qualitatively.

## Result and Discussion

### A. Respondent Characteristics

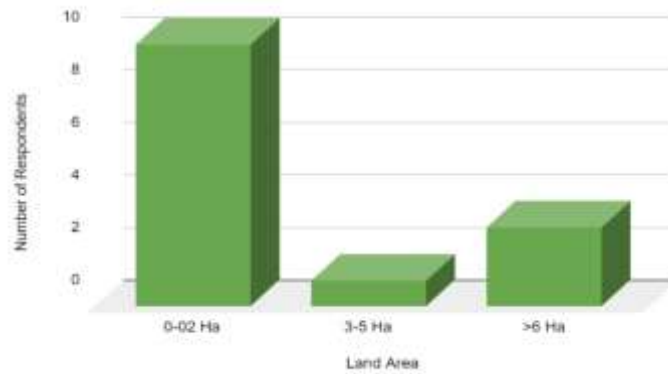


Figure 1. Number of Respondents Based on Cultivated Land Area

Figure 1 shows that the average respondent has a cultivated land area of 0-2 Ha as many as 10 respondents. Even though the area of land cultivated is not large, the level of crop productivity can be said to be good because it is a horticultural crop in the form of vegetables (mustard greens, bitter melon, chili, tomato, eggplant) and fruit (papaya, watermelon, jackfruit, pineapple). All can be cultivated throughout the year and can be harvested without time limits when they are at harvest age. Not only for household consumption, excess harvest can also be sold to provide additional income for the household.



Figure 2. Community Crop Harvest Results



Figure 3. The community field directly borders the forest

Based on interviews with respondents, apart from horticultural crops, there are also plantation crops planted, namely rubber and oil palm. Until the time the interview was conducted, the respondent had never harvested oil palm fruit because it was only at the stage of producing sand fruit. Sand fruit is a term for 12–18-month-old oil palm fruit which is very small in size and this fruit is not ideal for selling for further processing. So, it could be said that the oil palm planted by the respondents has not produced results. If orangutans ate the respondent's oil palm plants, the respondent would feel the impact of major losses due to the conflict.

## B. Human-Orangutan Conflicts

Respondents who had conflicts with orangutans in Tanjungpura, Mayak, and Sungai Awan Kiri, the initial entry of orangutans into fields occurred after forest and land fires occurred in 2015. Forest damage due to forest conversion turned forest areas into coconut plantations. Palm oil is the cause of human-orangutan conflict in Tanjungpura and Mayak (Suciadi, 2016). Oil palm plantations that are opened without heeding government regulations retain 30% of the area of rivers and/or islands with proportional distribution by the mandate of Law No. 41 of 1999, known as High Conservation Value (HCV), which will eliminate orangutan habitat. Disturbed animal habitats cause these animals to expand their range into community fields to look for food (Kamin, 2018).

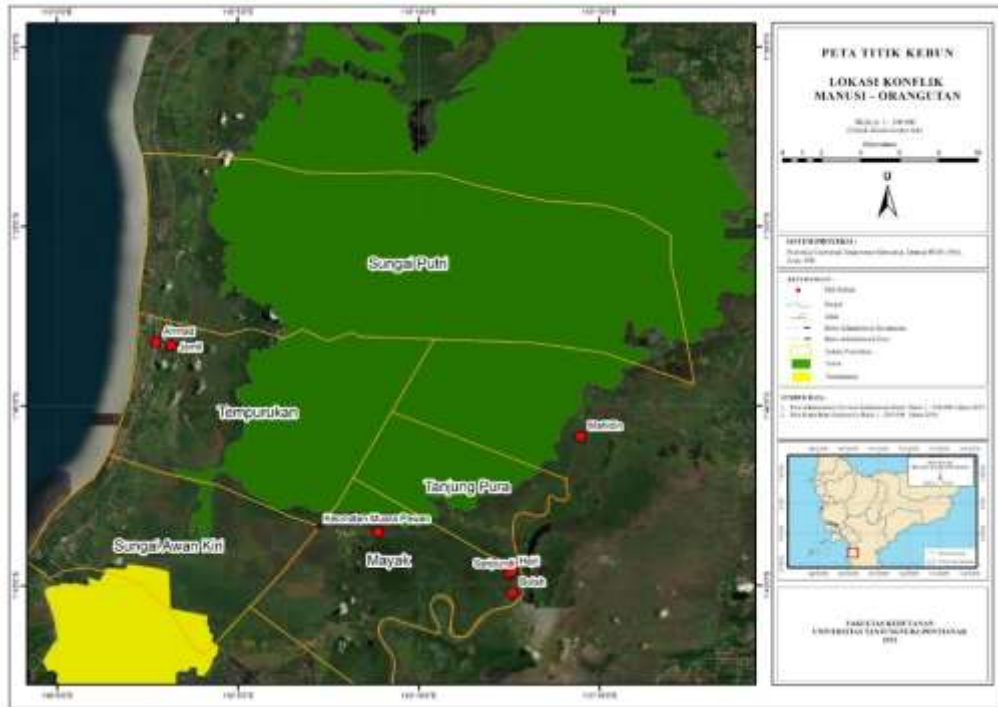


Figure 4. Map of locations where orangutans were found and where human-orangutan conflict occurred in the Sentap Kancang Landscape

Based on in-depth interviews with respondents, it was found that two community groups conflicted with orangutans. The first group is people who experienced financial losses as a result of their plantations being damaged by orangutans. The second group is people who have not experienced financial losses but the influx of orangutans has created a sense of anxiety and fear for the community. This fear arises as a result of the knowledge a person has regarding the situation they are feeling, whether the situation is threatening or not (Safaria & Saputra, 2012). This fear leads to the emergence of a negative view of the presence of orangutans.

According to the statement of respondents in Tempurukan, the appearance of the orangutans did not cause major damage because the orangutans only took plants that were on the border between the field and the forest. The number of fruits or vegetables taken is around 4 to 5, depending on the orangutan's ability to grasp with their hands. However, the appearance of orangutans has made people more alert because they are afraid of being disturbed or even hurt by orangutans. Respondents in Tempurukan stated that the orangutans who entered their field did not damage anything, but only took the respondent's bag which was placed in a coconut tree. Meetings like this make many people feel afraid and immediately contact the authorities through the YIARI Partner Team in Tempurukan.

The interaction between humans and orangutans will certainly become a conflict if one of the parties is harmed. Conflict does not only involve financial losses. Conflict can also give people fear. It is not uncommon for there to be conflicts in human perception regarding the existence of orangutans themselves. Orangutans are often considered pests because they destroy community fields in many locations, especially at the border of forests and community fields (Yuwono, 2007). The worst consequences of this perception can result in orangutans being captured, tortured, or even killed. This is certainly contrary to law no. 5 of 1990 article 21. If something as this article happens, the person or person who does it will receive a fine of Rp. 100,000,000.00 and imprisonment for 5 (five) years.

### C. Community efforts to deal with orangutan conflicts

Based on the results of interviews and joint observations with respondents and the YIARI Partner Team in five research locations, it was found that community management efforts to keep orangutans away from entering the fields were still carried out using traditional methods. Traditional methods include being chased away by making noises and some guard the field until the orangutan leaves. Apart from the previous two methods, some people choose to run and report to the authorities. The authorities here are the West Kalimantan BKSDA, especially the Regional Work Section I (SKW I) Ketapang and the Yayasan Inisiasi Alam Rehabilitasi Indonesia (YIARI).

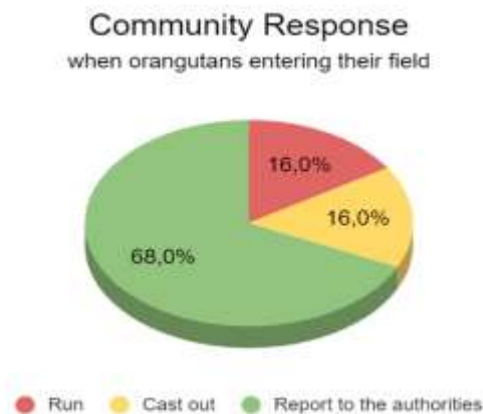


Figure 5. Community response when they see orangutans entering their field

Based on data from Figure 5, it can be seen that 68% of the community's response when an orangutan entered their field was to immediately report it to the authorities. The community considers that this ledge is the safest step that the community can take so as not to cause major damage and loss. There 16% of people chose to run because they were afraid that the presence of the orangutan could threaten their safety. And there are 16% of people who choose to chase away orangutans themselves by making noises from hard objects, including sounds from their mouths.

The story is different from several respondents in Tempurukan in responding to orangutans entering their fields. The community chose to let the orangutan into the field because they thought that the orangutan would not bother humans. The respondent felt sorry for the condition of the orangutans who had entered the community field. *"Sometimes I feel sorry for the orangutans who come into the field, so I leave them alone but I still report them to Pak Man (YIARI Partner). I'm sure the orangutan won't be disturbed because it only enters the field to look for food. We're in the wrong. We are the ones who opened a field near their house. But what can we do, we also need to eat"* (Mrs. Hasanah, 2022).

According to Alikodra (2010), overcoming short-term problems related to the entry of wild animals into community fields can be done by making fences on cultivated land, herding or translocating orangutans to other locations where the habitat is safer and more suitable for orangutans. However, different things were found from the results of the interview with Mas Tri Giyat Desantoro, Manager of Biodiversity Research Landscape Management at YIARI. Mas Tri believes that translocation is not the absolute answer to avoiding human-orangutan conflict. The orangutan may return to the same place because he already knows that that place can provide the food he needs. We also cannot guarantee that orangutans will not go anywhere considering that according to Meijaard in Ashari (2020), the home range of adult male orangutans reaches 2,500 Ha and adult female orangutans up to 850 Ha.

#### D. Human-Orangutan Mitigation Conflict

Preventive measures are always recommended because they are useful for preventing damage due to orangutan disturbances. New countermeasures will be taken when problems that occur after damage caused by orangutan disturbances have been resolved.

To minimize the occurrence of conflict and losses resulting from conflict, there needs to be collaborative action from all authorized parties such as the government, private sector, and society. BKSDA SKW I Ketapang is partnering with YIARI to strengthen the functions and actions of conservation of biological natural resource diversity in the form of primate conservation in West Kalimantan. YIARI acts as an important support system for BKSDA in carrying out its duties to save endemic primates and national pride, namely orangutans. Apart from the two institutions above, the active role of the community is also an important key in the action plan for mitigating human-orangutan conflict. Because the community itself is an important actor in mitigation actions.

YIARI's conflict mitigation actions are varied. The OPU Team formed a Partner Team to assist YIARI in responding to community reports about orangutans entering plantations and helping resolve conflicts. Currently, 5 villages are partners of the OPU Division the villages of Tanjungpura, Mayak, Tempurukan, Sungai Putri, and Kuala Satong. The Partner Team also provides education to plantation owners about orangutans so that in the future the community knows what to do if orangutans come to their plantations. This kind of thing is done so that no more people will directly contact the BKSDA or YIARI hotline to ask for orangutans to be rescued immediately, even though that is the last alternative. Apart from that, the Partner Team also has a certain schedule for carrying out patrols around the forest directly adjacent to the village, especially in locations where many orangutans enter. The Partner Team is also always equipped with sound or noise mitigation equipment which will be turned on to prevent orangutans from entering the community field.



Figure 6. Partner teams doing patrols (left), handmade cannon as a simple mitigation tool (right)

YIARI has an Education and Public Awareness Division which works to disseminate information about orangutan conservation and their habitat. Conservation education and public awareness must continue to be carried out for all levels of society, especially the younger generation. It is important to carry out continuous education because successive generations require them to know about orangutan conservation and their habitat so that the sustainability of orangutans and forests is maintained.

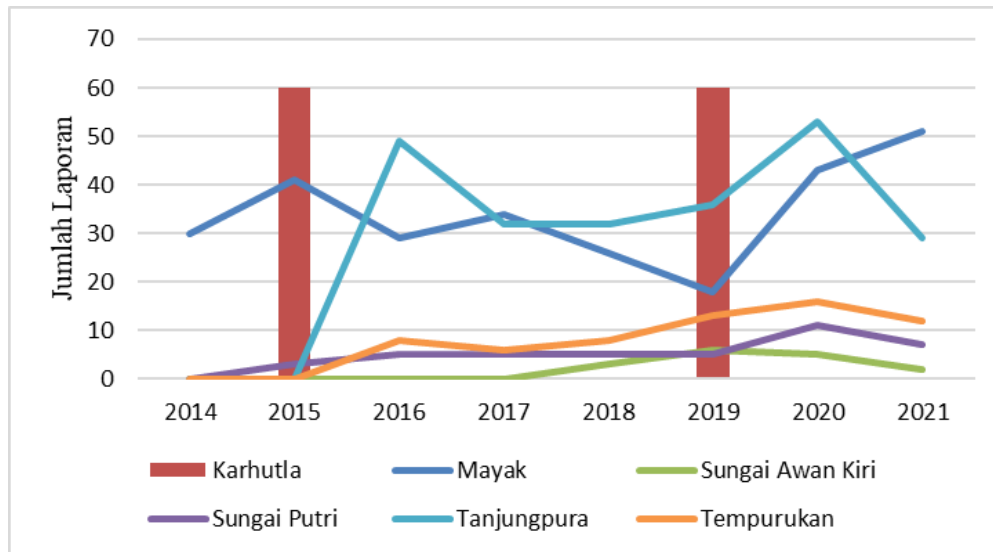


Figure 7. Graph of the Number of Orangutan Cases Entering Community Field in 2014-2022 in the Sentap Kancang Landscape (Source: Data from YIARI OPU Partner Team and Mobile Patrol)

Dynamics of the number of reports from community plantation owners which have been verified directly by the Partner Team and the OPU Division. On average, the five villages experienced an increase in the number of conflicts in 2016 and 2020. According to the Directorate General of Climate Change Control, Ministry of Environment and Forestry (2019), the large fires that occurred in 2019 were the result of the peak of the dry season. This incident caused the loss of forest cover as a habitat and food source for orangutans, which caused orangutans to enter community fields to look for food.

Based on the explanation above, we can conclude that if we want to reduce the number of human-orangutan conflicts, we must also protect the orangutan habitat ecosystem. Mitigating human-orangutan conflict must be synergized with mitigating forest and land fires. This is done so that fires do not occur, and the ecosystem and the potential for human-orangutan conflict are also reduced.

Community behavior is also gradually changing as a result of conflict mitigation efforts in the form of socialization and community awareness about orangutan conservation by the West Kalimantan BKSDA SKW I Ketapang and YIARI. Adi Susilo, S.Hut (Conservation Analysis of West Kalimantan BKSDA SKW I Ketapang Area) said, if in the past what was being fought for were cases of killing and keeping orangutans, currently there are very few cases of keeping orangutans and reports regarding this matter. Orangutans enter the field. This change had quite an impact on the community's attitude after receiving guidance and providing information from the WRU Team regarding the dangers of keeping protected wild animals.

## Conclusion

Human-orangutan conflict is prone to occur if areas of human activity are adjacent to orangutan habitat. Based on field observations and interviews, it was found that 5 villages in the Sentap Kancang Landscape are areas prone to human-orangutan conflict as shown on the conflict map are the villages of Sungai Awan Kiri, Tanjungpura, Mayak, Tempurukan, and Sungai Putri. This area is prone to conflict because the community gardens are directly adjacent to the forest which is the metapopulation of Mount Palung-Sungai Putri.

Based on in-depth interviews with 14 people in the Sentap Kancang Landscape, two types of losses were found due to human-orangutan conflict. First, there is a conflict in society's negative perception or view of orangutans. People in this group feel afraid or even threatened if orangutans enter their gardens. This kind of perception is dangerous because it can lead to killing orangutans if the orangutans are perceived as pests and causing harm. Second, financial losses are due to plants being eaten or damaged by orangutans. The losses caused by orangutans can be said to be very detrimental, especially for people whose main income is from gardening.

Many factors cause human-orangutan conflict, one of which is fires that destroy orangutan habitat. Based on the conflict report data that has been verified by the OPU YIARI Partner Team, it can be concluded that there are high and low dynamics of conflict reports. Conflicts tended to increase after forest and land fires in 2015 and

occurred again with the same pattern in 2019. This shows that mitigating human-orangutan conflict must also be in line with mitigating forest and land fires so that orangutan habitat is maintained and the potential for human conflict is maintained. -orangutans are decreasing.

For community plantation owners, efforts need to be made to increase security on community land/fields directly adjacent to the forest to avoid possible disturbances by orangutans. This can be done by planting buffer plants that are not orangutan food or that orangutans don't like between gardens and forests. For government authorities, there needs to be open discussions with affected communities and private/non-government institutions to produce solution actions for communities who have experienced losses due to conflicts with orangutans. Private/non-government institutions can create an insurance system for farmers who directly border protected wildlife habitats. This is done to provide a sense of security to farmers when damage occurs due to protected wild animals, especially orangutans because they have crop damage insurance and to prevent people from considering orangutans as pests and can threaten the lives of orangutans and humans. Apart from that, outreach regarding orangutan conservation and protecting their habitat also needs to continue to be carried out to preserve orangutans and forests, especially to the younger generation as the nation's next generation.

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