

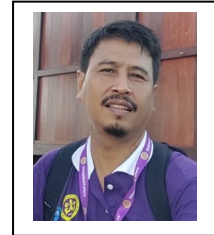
Ann
PUBLISHER

Journal of Community Services (Abdisci)

e-ISSN 3047-2431
p-ISSN 3047-3489



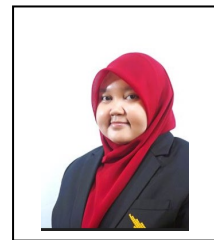
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CITIZEN RESEARCH PRACTICE: LEARNING DATA COLLECTION ON SUMATRAN SLOW LORIS - ELECTRICAL GRID INTERACTION IN LABUHAN RATU VII, EAST LAMPUNG

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Abstract:

Background. Supporting the need for the electricity network to carry out daily activities was done by PLN including Penyulang Kecak, the Sribawono Substation for Labuhan Ratu VII, Labuhan Ratu, East Lampung, a WKNP buffer village, the natural habitat of sumatran slow lorises and the electricity grid.

Aims. To discussion/interview with village officials related to areas affected by interaction with sumatran slow lorises, from representatives of Labuhan Ratu VII was conducted

Methods. Community service in the introduction and collection of community-based data related to the interaction of sumatran slow lorises with the electricity network was carried out by meetings, discussions and companion visits

Conclusion. The interaction of sumatran slow loris wildlife and the electrical grid can result its losses both injuries and fatalities. Mitigation conflict tools has been set. Strengthening the local communities supports, companionship on citizen research, community-based data collection assistance was done in Labuhan Ratu VII, East Lampung. Knowledge on sumatran slow loris, electrical grid and conflict mitigation was engaged.

Implementation. Data collection based on rapid assesment includes the research perception, document and data collection in the field was introduced and applied

Keywords: Electrical grid, Labuhan Ratu VII, *Nicticebus coucang*, PLN, sumatran slow loris

INTRODUCTION

Labuhan Ratu VII, Labuhan Ratu, East Lampung, Lampung, is one of 24 buffer villages directly adjacent to Way Kambas National Park (WKNP) with 5 Dusun, Dusun 1-4 (Plangkawati) and Dusun 5 Margahayu (Rustiati *et al.*, 2018; Way Kambas National Park,



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2017), a natural habitat for various wildlife including sumatran slow lorises (*Nycticebus coucang*), locally acknowledged as kukang sumatra. Administratively, the boundaries of Labuhan Ratu VII are to the north of Labuhan Ratu VI, Labuhan Ratu, to the south of Braja Asri, Way Jepara, and to the west of Labuhan Ratu III and Labuhan Ratu. The 1,100 ha lowlands, including traditional plantations such as padi field, rubber, corn, bananas, cassava and fruit trees, are a potential source of feed for the sumatran slow loris wildlife. Most of the people of Labuhan Ratu VII have a livelihood as farmers.

In line with development, the expansion of the electricity network by the Perusahaan Listrik Negara (PLN) was also carried out in Labuhan Ratu VII, the existence of the electricity network is very important for the development in Indonesia (Doly, 2014). The expansion of power grid feeders in settlements often intersects with natural habitats and natural active routes of sumatran slow lorises, resulting in interactions between sumatran slow lorises and the electrical grid. Labuhan Ratu VII is one of the villages affected by animal-human conflicts, in addition to the conflict between the sumatran elephant (*Elephas maximus sumatranus*) and humans, also interaction with arboreal animals, sumatran slow loris. Animals that cross the outer borders of villages and WKNP areas include sumatran elephants, and that interact with the village landscape such as various types of birds that use vegetation, bats for fruit and insect food in settlements, especially in housing yards, and sumatran slow lorises that are found across the network of electric cables in their activities. The interaction of the sumatran slow loris occurs with the construction of an electricity network, which intersects with the cruising route or active route when the sumatran slow lorises carry out their daily activities at night, using the electricity network as a medium of movement. Conflicts between sumatran slow lorises and power grids can cause its injuries and deaths and disruption of electricity flow in settlements. The highest sumatran slow loris death is in East Lampung, most of which are WKNP buffer villages, its natural habitat. The death of 2 sumatran slow lorises in the power grid was found in Dusun 2, Plangkawati, Labuhan Ratu VII (PLN, 2022, unpublished). The interaction of venomous sumatran slow loris with humans also has a risk of human injury due to bites as an anti-predator behavior.

The installation of sumatran slow loris conflict mitigation equipment and power grid has been carried out including fibers, cap, rotary, insulator caps, and XLPE (Cross-Linked Polyethylene, which is polyethylene that has been changed through a cross-binding process so that it has excellent electrical insulation properties, high heat resistance, and superior mechanical and chemical resistance) (<https://karuniainticemerlang.com/article/5/xlpe-vs->

[pvc](#)). Understanding the use of the electric cable network as a medium for the movement of sumatran slow lorises and information on the characteristics of the interaction area of sumatran slow lorises with the electricity grid is crucial to support sumatran slow lorises existence, local communities and PLN's strategy of expanding an animal-friendly electricity network and avoid and overcome conflicts between sumatran slow lorises and electricity networks.

The main purpose of the electric power system is to strive for the supply and delivery of electricity that still pays attention to quality and reliability (Suhadi and Wrahatnolo, 2008). The electricity network is needed by the community to carry out daily activities, so it is necessary to carry out extensive distribution so that each region gets access to electricity and facilitates all activities. The need for the electricity network to carry out daily activities, so *penyulang* (feeders) to villages are carried out, supported by the substation. *Penyulang* itself is part of the distribution of electricity from the substation to and from consumers. Each *penyulang* has its own code and one of them is *Penyulang Kecak*, the Sribawono Substation for Labuhan Ratu VII, Labuhan Ratu, East Lampung. From this *penyulang*, villages in related areas get a good electricity network (Sariadi, 1999). Labuhan Ratu VII as a WKNP buffer village, intersects its natural habitat with settlements and results in interaction between animals such as sumatran slow lorises and the electricity grid (Yusuf *et al.*, 2023). The interaction of sumatran slow lorises wildlife and the electrical grid can result its losses both injuries and fatalities (Girindra and Supriatna, 2020). PLN UP3 Metro data showed that sumatran slow lorises deaths on the electrical grid in 2021-2022 before the installation of its conflict mitigation equipment and the electrical grid in East Lampung. Sumatran slow lorises deaths due to electric shock during activities on power grid/cables were found in 34 villages in East Lampung, including 2 deaths of sumatran slow lorises in Dusun 2, Plangkawati, Labuhan Ratu VII (Dwiyoga, 2024).

The PLN is a state company with the task of providing electricity for the public interest, and for the implementation of the provision of electricity. This electric power system is the supply and distribution of electrical power (Albaroka and Widodo, 2017). The development of the electricity network is very important in supporting the development in Indonesia (Doly, 2014; Albaroka and Widodo, 2017). *Penyulang*, feeders as a means of distributing electricity from substations to user consumers are part of the distribution of the electricity network to all districts in Lampung, including East Lampung (Pabla, 1991). For Labuhan Ratu VII, the electricity network comes from the Sribhawono Substation, *Penyulang Kecak*. Challenges related to wildlife disturbances are power grids that are

adjacent to or across the natural habitats of wildlife such as squirrels, snakes, birds, and sumatran slow loris. Efforts to manage conflict mitigation by PLN with the installation of conflict mitigation tools have been carried out with the concept of barriers in the form of cap, rotary, fibers and insulator caps (Aji and Mashdurohatun, 2021).

The installation of sumatran slow lorises conflict mitigation equipment and power grid has been carried out including fibers, caps, rotaries, insulator caps, and XLPE (Cross-Linked Polyethylene, which is polyethylene that has been changed through a cross-binding process so that it has excellent electrical insulation properties, high heat resistance, superior mechanical and chemical resistance) (<https://karunianticemerlang.com/article/5/xlpe-vs-pvc>). Sharing understanding to local communities on the use of the electric cable network as a medium for the movement of sumatran slow loris and information on the characteristics of the interaction points of sumatran slow lorises with the electrical grid is very necessary to support PLN's strategy of expanding an animal-friendly electricity network and avoid and overcome conflicts between sumatran slow loris and electricity networks

METHODS

Community service in the introduction and collection of community-based data related to the interaction of sumatran slow lorises with the electricity network was carried out by meetings, discussions and companion visits to the location of the sumatran slow loris encounter on the electricity grid in the Labuhan Ratu VII, Labuhan Ratu, East Lampung. Introduction and understanding of the existence of sumatran slow loris, electrical grids and wildlife conflict mitigation tools and power networks were conveyed in the meeting. Rapid assessment and citizen research based monitoring related to the interaction of sumatran slow loris with the electricity grid is provided including recording data on time, location, and general characteristics of vegetation landscapes.

Discussion/interview with village officials related to areas affected by interaction with sumatran slow lorises, from representatives of Labuhan Ratu VII was conducted. From the results of discussions with village officials, a preliminary survey was conducted as well as interviews with community representatives (Diana *et al.*, 2021). Participants are community members representing the Tourism Awareness Group (Kelompok Sadar Wisata, Pokdarwis) Gerbang Way Kambas and community members who are involved in sumatran elephant mitigation conflict monitoring partners. Interviews were conducted with the

affected residents including the experience of the time, location and conditions of the encounter with the sumatran slow lorises. Based on data and information from the community, companionship on a survey of potential locations of sumatran slow lorises in residential electricity networks was carried out.

RESULTS AND DISCUSSION

The meeting with the community was carried out, with the village officials (Figure 1) at the Labuhan Ratu VII Headquarter, Labuhan Ratu, East Lampung, the secretary and community representatives. Understanding the existence of sumatran slow lorises on the power grid is well known, including public responses to the interaction of sumatran slow lorises



Figure 1. Meeting at Labuhan Ratu VII Headquarter, Labuhan Ratu, East Lampung

The introduction and understanding of the existence of sumatran slow loris was also conveyed through a meeting in the camping ground area located in Dusun 5, directly adjacent to the WKNP area (Figure 2).



Figure 2. Meeting at the Dusun 5 camping ground, Labuhan Ratu VII, East Lampung

The existence of a village that is directly adjacent to the natural habitat of the sumatran slow loris and the many food sources such as fruit plants are an attraction for animals, including sumatran slow loris, which are classified as omnivores, as is the case with other primates whose main food is fruits and leaves. Lorises in their natural habitat, also feed on grains, insects, bird eggs, lizards and small mammals (Napier and Napier, 1967).

Conflict mitigation efforts by PLN with the installation of conflict mitigation tools have been carried out with the concept of barriers in the form of cap, rotary, fibers and insulator caps (Aji and Mashdurohatun, 2021). The introduction of existence of conflict mitigation tools caps, rotaries, fibers and insulator caps (Figure 3) that have been installed in the area is also conveyed as a form of protection for sumatran slow loris who carry out activities using electrical network cables. Conflict mitigation tools aim to secure sumatran slow loris on the power grid and minimize the potential for power grid flow disruptions.



Figure 3. Sumatran slow lorises conflict mitigation tool and power grid in Dusun 5, Labuhan Ratu VII, East Lampung

The community can help monitor the presence of sumatran slow loris on the electrical grid, by being provided with rapid assessment by taking pictures, geographical information, providing notes and information along with documentation and has been carried out by community member Tatang Supriyadi, with guidance on how to take data and documentation (Figure 4).



Figure 4. Documentation and data collection of interaction points with sumatran slow loris by Tatang Supriyadi

From the documentation taken using a mobile phone, detailed data including location, time and geographical information can be recorded. Vegetation data collection was also conveyed and practiced by visiting the location of the interaction of sumatran slow loris with the community in Dusun 5, Labuhan Ratu VII (Figure 5).



Figure 5. Taking vegetation landscape in Dusun 5, Labuhan Ratu VII

Companionship is also carried out to obtain information from people whose live close to the location of the interaction of sumatran slow loris with the electrical grid (Figure 6).



Figure 6. Interview with the community in Dusun 5, Labuhan Ratu VII

Interviews are conducted informally on the location and recorded for supporting data. Overall, citizen research, community-based data collection assistance can be carried out by first conducting understanding related to the purpose of research activities, the data needed and the way data and documents are taken.

CONCLUSION

Companionship on citizen research, community-based data collection assistance has been carried out in Labuhan Ratu VII, East Lampung. Knowledge on sumatran slow loris, electrical grid interaction and conflict mitigation was engaged. Data collection based on rapid assesment includes the research perception, document and data collection in the field was introduced and applied.

Acknowledgement:

High appreciation to the University of Lampung for the DIPA BLU Funding year 2025, and the local communities and Pokdarwis Gerbang Way Kambas, Labuhan Ratu VII, East Lampung for the team work.

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