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Community Based Conservation on Lubuk Larangan and Conservation Corridor in North Sumatra

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ABSTRACT

Lubuk-larangan or prohibited river is a traditional local wisdom practiced by the community in West and North Sumatra in preserving natural areas particularly fish habitat and river ecosystem. The practice is based on customary and communal deliberation to help the villages maintain their communal resources sustainably. The protection brings a positive impact on the ecosystem as well as various wildlife and aquatic biota. By managing the existence of lubuk-larang, they will also guard the natural ecosystem as well as the dwindling natural habitat. This paper presents a hypothesis that the prohibition of the area may potentially function as a conservation corridor in facilitating the home range of natural habitats and wildlife accommodation within the conservation area. There are 25 conservation areas in North Sumatra with a total area of approximately 1 million ha. Some areas could potentially become a natural corridors for wildlife. Through this study, we put a spot of potential corridor using GIS, by mapping the areas from 0 m of the protected areas such as the national park, to up to 5000m to the position of Lubuk-Larang. However, obtaining this map can provide legitimacy for communities in the surrounding conservation areas such as Batang Gadis National Park to participate indirectly in taking care of the national park by supporting their own Lubuk-Larang. In practice, the community implements an opening ritual that is only held once a year, and fines are imposed for anyone who violates the rules that have been set and agreed upon. The regional government also supports the existence of lubuk-larang in utilizing natural resources such as local fish sustainably. Based on our findings, there are 153 lubuk-larangan located at 64 rivers in 5 districts in North Sumatra that can be used as a link between natural life and conservation areas.

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Introduction

Culture in the form of local wisdom is deeply embedded in all aspects of life in every region and in every country. This culture will then continue to regenerate and will be passed down from generation to generation which is timeless and modern. The culture of the Indonesian people who grow with nature leads to efforts to grow local wisdom to support the lives of the people. Local culture itself is seen as local (local) ideas that are wise, full of wisdom, and of good value, which is embedded and followed by members of the community¹. In addition, Indonesia itself is famous for its natural wealth, where environmental conditions in Indonesia produce a diversity of ecosystems, and natural resources and gave birth to humans as a support for existing survival². Humans and traditional wisdom and local wisdom cannot be separated. that local culture and wisdom are local (local) ideas that are wise, full of wisdom, and of good value, which is embedded and followed by members of the community.

The progress of the current era is not spared by the expansion of cities which results in the erosion of land for natural life which also has an impact on the depletion of land for animals to live and live. If conservation areas are one way out of the problem of depleting the scope of nature, then protecting them is something that must be applied to all living things around them. In practice, we encountered one of the conservation organizations in the form of Lubuk Larangan which is spread across North Sumatra and has its uniqueness in protecting nature by applying customary principles and local wisdom in its implementation. Lubuk Larangan is an area of a river that is naturally a breeding ground for fish or other aquatic biotas. That area is a prohibited area for harvesting fish and other biotas within a certain period. This area is managed by the community through hamlet regulations. So benefits can be obtained, but utilization is limited by regulations that have been agreed upon by custom so that the sustainability of the ecosystem in Lubuk Larangan is always maintained.

Local wisdom in the form of Lubukban in the area of North Sumatra then becomes one of the important things because its existence makes it a pillar for nature conservation and the living ecosystem of the surrounding community which has been proven in research conducted in West Sumatra³. This paper will lead to the existence of the local wisdom of Lubuk Larangan which is properly utilized and maintained and able to become a conservation corridor in facilitating natural habitat home ranges and wildlife accommodation around conservation areas.

Method

Research Design

This research is descriptive qualitative research using in-depth interviews with the informants concerned, such as residents around Lubuk Larangan, traditional leaders, and involving several local officials who have direct contact with Lubuk Larangan. Apart from that, we also held FGD (Focus Group Discussion) by presenting experts and activists.

Our research was carried out from January 2022 to July 2022 which is located in North Sumatra. After we received an explanation from in-depth interviews about how the people around Lubuk Prohibition apply adat in protecting it, we mapped the distribution which we then matched with the distribution map of the GIS (Geographic Information System) conservation area to see the distances that could be used as a potential expansion of wild animal home ranges located in a conservation area.

Results and Discussion

Physical Conditions of North Sumatra

North Sumatra Province is located between 10-40 North Latitude and 980-1000 East Longitude. The area of North Sumatra Province is 71,680.68 km² or 3.72% of the total area of the Republic of Indonesia. North Sumatra Province has 162 islands, namely 6 islands on the East Coast and 156 islands on the West Coast. The climate in North Sumatra includes a tropical climate which is influenced by trade winds and monsoon winds. Average air humidity 78% - 91%, rainfall (800-4000) mm / year, and 43% sunlight.

Local Wisdom of Lubuk Larangan and Surrounding Communities

Local wisdom including Traditional Cultural Expressions (EBT) includes all intangible cultural heritage developed by the local community, collectively or individually in a non-systemic way and embedded in the community's cultural and spiritual traditions. The category of intangible cultural heritage includes oral traditions, performing arts, social practices, rituals, celebrations, knowledge, and practices about nature and the universe or knowledge and skills to produce traditional crafts.

Lubuk Larangan is an area that is used as a traditional conservation area for rivers, fish, and the surrounding environment because the river ecosystem is not just fish⁶. Lubuk includes the culture and ancestral heritage of the community to preserve the river area. This tradition is passed down from generation to generation, so it never goes extinct. There is a grass and forest area by the river. The creation of a no-go zone in the river area is carried out directly by the local community. Lubuk Larangan is an effort by community groups or indigenous peoples to preserve certain parts of the river, especially the fish contained therein^{7,8}. With Lubuk Larangan all members of the community around the Lubuk Larangan area are obedient to guarding the river and the community is not allowed to take fish and pollute the river. Fish harvesting can be done once a year by mutual agreement in the community.

In the past, local wisdom on the environment in managing natural resources was always packaged in terms of taboos that were religious and/or magical in nature⁹. The existence of belief in things that are ideologically different from current ideology, and awareness of the environment by protecting it by staying away from its taboos is one of the most important points to be implemented up to now. In this section, we analyze several Lubuk Larangan in Mandailing Natal as a sample that we took from approximately 153 Lubuk Larangan in North Sumatra. From these results, we find that currently Lubuk Larangan still maintains its traditions and customs in its application. Not only that,

Strengthening the preservation and utilization of local wisdom, especially based on Lubuk Larangan, is one of our efforts to fight against several massive activities of illegal land clearing which are often carried out by irresponsible parties⁶. Preserving Lubuk Larangan prohibition, utilizing, and maintaining it is one way to prevent activities that can damage nature. North Sumatra is one of the areas with many Lubuk Larangan. Mandailing Natal Village is one of the areas with the most Lubuk Larangan. This area also upholds traditional values⁹.

From the research results and the data we collected, we found 153 Lunuk Larangan located in North Sumatra which is located at 64 river points in 5 districts. We researched 8 places of prohibition, including Laru Lombang, Tambangan Jae, Naposo Bulung, Singengu, Ulu Pungkut, Tamiang III, Tamiang I, and Usor Talong. Of the eight Lubuk Larangan, several Lubuk Larangan were opened and introduced as tourist attractions. However, the regulations that apply still use the customs regulations that apply to the area. All the Prohibition areas that we encountered, of them, prohibited the catching of fish/water biota in any form outside of a predetermined time. Usually, the manager (the local community) imposes a ban on opening and closing Lubuk once a year. This is usually done to coincide with Eid al-Fitr at which time, according to them, relatives who migrate can return home and enjoy natural products in the

form of fish. Catching is also only on a traditional basis and is not allowed to use equipment that can harm the ecosystem of aquatic biota. The regulations that apply are also very diverse, if found breaking the rules usually sanctions can be in the form of fines or karma which is believed to occur for those who violate it. For the people around Lubuk Ban in the Mandailing Natal area, besides being local wisdom, Lubuk Ban is also very helpful for the sustainability of local life by making use of it in the long term.

The Lubuk Larangan models in Mandailing Natal are also very varied. From those managed by traditional beliefs, groups, youth, and orphans, and even managed individually, Lubuk Larangan can develop and be used according to the needs of each village. In addition, each Lubuk Larangan has its regulations for maintaining its sustainability. The challenges that must be faced in the future in maintaining local wisdom values include: pollution due to illegal gold mining, the potential for overfishing which can threaten the ornamental fish ecosystem as an icon of Lubuk Larangan, alignment of festival schedules with biological cycles fish growth in every Lubuk Larangan⁹.

In addition, the government also supports and plays a role in the preservation of Lubuk Larangan in the region¹⁰. This statement is supported by the steps taken by the government in dealing with the problem of decreasing endemic fish species by restocking seeds. In addition, he also said that other issues such as increasing awareness of the surrounding community about protecting the ecosystem by providing education about the importance of protecting nature. He also said that assistance from relevant stakeholders was to support the program. The number and location of Lubuk Larangan in North Sumatra have not been fully registered, so it cannot be said how many Lubuk Larangan there are in North Sumatra¹⁰.

Conservation Area Corridor in North Sumatra

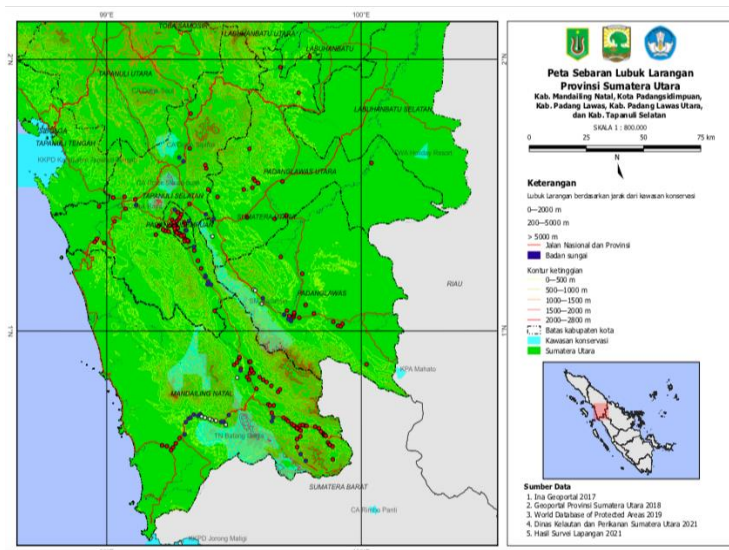


Figure 1. Distribution Map of Lubuk Larangan in North Sumatra

In 2016, the Director General of KSDAE established guidelines for determining wildlife corridors as essential ecosystem areas. Determination and management of Wildlife Corridors are very necessary for efforts to protect and preserve wild animals outside conservation areas. Based on the gap analysis of the ecological representation of conservation areas in Indonesia in 2013, it is estimated that around 80% of the important biodiversity is located outside conservation areas. Because various efforts have been made by various parties to maintain the integrity of biodiversity in Indonesia. One of the efforts made by the government, especially the Ministry of Environment and Forestry, is the management of corridors for wildlife.

Table 1. Lubuk Larangan in North Sumatra has the potential to be a Conservation Corridor

No	Conservation area	Total LL 0-2000M distance	Total LL Within 2001-5000M	Total
1	TN Batang Girl	7	15	22
2	Between CA Lubuk Raya, Dolo Sibualnuali and SM Barumun	-	2	2
3	SM Barumun	3	17	20
4	CA Lubuk Raya	-	3	3
5	CA Dolok Sipirok	-	2	2

Lubuk Ban is a natural area that can be a bridge for conservation success. Approximately large populations of protected animals including key species such as tigers, rhinos, tapirs, and elephants have also been recorded outside the protected area. The existence of natural land can be a bridge in overcoming the narrowing of habitat and potential conflicts between animals and humans. The existence of a corridor is very important to provide flexibility to living things in fulfilling their right to life and carrying out their ecosystem functions.

Table 2 Lubuk Larangan as a Conservation Corridor

Corridor Type	Corridor Function	Potential Existence in Lubuk Larangan	
		Yes	NO
Heart Corridor	Linear Landscape	+	-
	Vegetation lines connecting the main habitats	+	+
	Link habitat path	+	-
	Connection between landscapes	+	+
Wildlife Corridor	Wide vegetation path for movement (movement)	+	+
Ecosystem Corridor	Wildlife migration corridor area	+	+

Conclusion

The people who live around Lubuk Ban adhere to traditions that have been passed down from generation to generation to maintain the existence of Lubuk Ban. In addition, the preservation of Lubuk Larangan certainly has an impact on the preservation of nature and the surrounding animals. Above all, the lubuk ban points around conservation areas can become wildlife corridors and add to the home range of wild animals living in conservation areas.

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