

The Contribution of Lubuk Larangan on Rural Socio-Cultural and Economic Development in West Sumatera

Abdullah Munzir

Department of Aquaculture, Faculty of Fisheries and Marine Science,
Universitas Bung Hatta
E-mail: am7296@gmail.com

ABSTRACT

Socio-culturally, the Lubuk Larangan is a kind of local wisdom existing in rural areas of Sumatra Island mainly in West Sumatra Province. Ecologically, it refers to a protected aquatic ecosystem managed by inhabitant living surrounding the ecosystem. The research objective is to study the contribution of the Lubuk Larangan on rural socio-cultural and economic development. A descriptive exploratory survey method, field observation, and qualitative analytical approach were applied. Main species of fish having good economic value conserved in the Lubuk Larangan are *garing*, eel, *mungkus*, quail, and *kapareh*. Besides, there are found some common cultivated fish growing in the ecosystem i.e. carp, tilapia, and catfish. Lubuk Larangan plays important role and contributes on the preservation of germplas and social cultural values as well, especially the spirit of *gotong royong* (cooperation). The Lubuk Larangan also provides finance for public infrastructure maintenance and development and provision of income generation through informal sector development. So far, there is almost no innovation applied for increasing its contribution.

Keywords: local wisdom, lubuk larangan, ecosystem, and rural development

INTRODUCTION

Unemployment and rural poverty tend to cause natural resources degradation. This occurred as the impact of direct and indirect exploitation of the existing resources for generating income without considering its sustainability. The tendency is easily observed on the utilization of aquatic resources at some ecosystems mainly lake and river. For instant, Syandri *et al.* (2014) mentioned that the carrying capacity of Lake Maninjau only for around 1,500 units of Floating Net Cage Aquaculture (FNCA) but, there were 15,660 unit of FNCA in 2012 which influenced on water quality degradation.

Lubuk Larangan. Lubuk larangan is a local wisdom founded in rural areas in West Sumatra Province and in other provinces of Sumatra Island as well. It is a kind of protected aquatic ecosystem that is utilized by local community under certain conventional regulation. Munzir (2011) explained that the management of Lubuk Larangan in rural area of Sumatra differs according to the variety of its utilization. Such as, for cultural even, irrigation, conservation, etc. The management system is also influenced by core stakeholder who controlled the aquatic ecosystem. They could be all inhabitants living near to the area of Lubuk Larang, part of mosque or *musholla* organization, part of sub district (*lurah/nagari/RT*) organization, or youth organization (*Karang Taruna*), etc.

The decrease of fisheries resources and the increase of fish species scarcity could have strong relation with fishing and other negative impact of human activities mainly for economic purpose. At the perspective of rural socio-cultural and economic development, this situation has also correlation with the degradation of local wisdom. Therefore, it is necessary to explore whether the local wisdom of Lubuk Larangan contributes on rural socio-cultural and economic development and how it works. The objectives of this study are to answer these questions.

MATERIAL AND METHOD

The study applied qualitative method using survey, explorative, and descriptive approaches. Fourteen Lubuk Larangans in Padang City and Padang Pariaman Regency are chosen purposively.

Field work is carried out to observe the utilities of the Lubuk Larangan ecosystem and to interview its stakeholder. The informant and respondent are determined by applying snowball method.

RESULT AND DISCUSSION

Ecosystems of Lubuk Larangan in Padang and Padang Pariaman. Lubuk Larangan ecosystems in Padang City are distributed in suburb area in 9 districts (kecamatan) of 11 districts of Padang City. Most of them are concentrated in 2 districts *i.e.* Koto Tengah and Kuranji. Both districts laid at eastern Padang nearby the hilly area of Bukit Barisan. List of LL observed in Padang is in Table 1.

Table 1. Lubuk Larangan which are observed in Padang

No	District (Kecamatan)	Kelurahan (Sub District)	Name of Lubuk Larangan
1	Kota Tengah	Balai Gadang	Batang Kandis
2	Kota Tengah	Kota Panjang Ikur Koto	Batang Koto Panjang
3	Kota Tengah	Kota Panjang Ikur Koto	Banda Ikur Koto
4	Kota Tengah	Lubuk Mintarun	Lubuk Luri
5	Kuranji	Banda Ampang	Banda Ampang
6	Padang Utara	Alai	Banda Alai
7	Nanggalo	Surau Gadang	Surau Gadang

According to DKP (2008), there are 79 locations at 11 rivers in Padang Pariaman Regency which are identified as aquatic ecosystem under local community control known as Lubuk Larangan. For the purpose of this study, 7 of the Lubuk Larangan are observed (Table 2).

Table 2. Lubuk Larangan which are observed in Padang Pariaman

No	District (Kecamatan)	Sub District (Kelurahan/Nagari)	Name of Lubuk Larangan
1	V Koto Timur	Padang Alai	Padang Alai
2	V Koto Timur	Kampung Sagit	Kampung Sagit
3	V Koto Timur	Kudu Ganting	Kudu Ganting
4	Patamuan	Tandikek	Batang Mangau Ketek
5	Patamuan	Batu Kalang	Batang Mangau Rayau
6	V Koto Kampung Dalam	Sikucur	Marungai
7	V Koto Timur	Koto Tinggi	Batang Naras

Almost all of Lubuk Larangan in Padang City located near to the community housing or living area, around less than 1-2 km. Some of Lubuk Larangan are no longer natural ecosystem because; some parts of this ecosystem are modified for rice field irrigation, water supply reservoir, city canal, etc. It is also found that in certain case, the function of Lubuk Larangan is reducing due to the influence of daily activities utilizing the aquatic resources. This case occurred on the Lubuk Larangan in Sub District Surau Gadang. Before year 2009, people coming to the Lubuk Larangan ecosystem are still not allowed to take fish or fishing in the area of ecosystem. There was announcement written at the area for warning visitor that fishing is forbidden. On September 30th, 2009, great earthquake of 7.6 SR destroyed many infrastructures in Padang City including water treatment plant units. More than a week, community around the area of Surau Gadang, even from other district came to utilize water resource of the Lubuk Larangan for daily household activities mainly swimming (taking a bath), washing clothes and carpet, vehicle, etc. Later on, the function of the ecosystem as Lubuk Larangan tends to be changing. Its function for fisheries resource conservation has decreased because of the increasing of other activities at the ecosystem (Figure 1).



Figure 1. Human activities has decreased the conservation function Lubuk Larang ecosystem in Surau Gadang in Padang City

Field observation pointed that the abundance of scarce fish species like *garing* and *sidat* (eel) which have high economic value is much decreasing compared to their population density in last decade. This related to the decreasing of local wisdom value on the management of Lubuk Larangan as well as the degradation environment quality of aquatic ecosystem where the Lubuk Larangan takes place. From 7 Lubuk Larangan which are observed in Padang, 2 of them are still in good quality to provide habitat for *garing* and *sidat* species. These species have high economic value and nowadays they are only found in two Lubuk Larangan in Padang namely Lubuk Luri and Batang Kandis (Figure 2).



Figure 2. Ecosystems of Lubuk Larangan Lubuk Luri (a) and Batang Kandis (b) in Padang City

Different with Lubuk Larangan in Padang, almost all of Lubuk Larangan observed in Padang ariaman Regency located relative far from community housing. Such location provides advantage for the life cycle of aquatic organism since their habitat is very productive to support photosynthetic

process and food chain dynamic in the aquatic ecosystem. *Garing* species is found in all Lubuk Larangan of Padang Pariaman Regency and other wild fish such as *sidat* is found in the 5 of 7 Lubuk Larangan observed. All fish species, wild fish and cultivate fishes found in Padang Lubuk (a) (b) 4 Larangan are also found in Padang Pariaman Lubuk Larangan. Those fish species are garing, sidat, mungkus, nile, gurame, kapareh, common carp, tilapia, cat fish, and prawn. One of productive Lubuk Larangan namely Batang Naras is shown below (Figure 3).



Figure 3. Lubuk Larangan Batang Naras in Padang Pariaman Regency

Contribution of Lubuk Larangan on Rural Development. The contribution of Lubuk Larangan on rural development in West Sumatra is described in several aspects as follow.

Socio-Cultural Contribution. In general, all Lubuk Larangan have one principal regulation that is, there is no free access to utilize of the ecosystem. It seems contradictory to the fact that Lubuk Larangan is indeed a common resource under common property right. In rural area of West Sumatra, the Lubuk Larangan is commonly managed traditionally under convention of local community. There are some Lubuk Larangan which are managed under participation of local youth organization named Karang Taruna but this kind of management tends to be functional if there will be activity due to utilization of Lubuk Larangan.

It is the consensus of rural society to get benefit from Lubuk Larangan which is used for sociocultural purposes as the main contribution priority of Lubuk Larangan utilization in the context of rural development. This is indicated by several points of view. First, the production of Lubuk Larangan is usually used for socio-cultural even such as celebrating the Prophet Mohammed birthday traditionally and other social togetherness on holidays or specific objectives. Second, cases of violation upon the society consensus concerning the utilization of e aquatic resource of Lubuk Larangan occurred very seldom. But, if it happens, the offender will be punished by the society. For instance, the offender has to provide building materials for rural infrastructure development or for public facility maintenance. Specifically, the punishment is different from rural to rural accordingly. Third, control mechanism on the utilization of the Lubuk Larangan resources is done under social responsibility. Informal leaders in rural area play very important role on the decision making process concerning the management or utilizing the aquatic recourses in the Lubuk Larangan including to determine the punishment for an offender. Fourth, some Lubuk Larangan have periodic maintenance and harvesting activities. Such evens need participation of rural community. This is important point to maintain as well as to sustain and develop the spirit of so called *gotong royong* which is very valuable for empowering the social capital for rural development. Fifth, in some rural areas, Lubuk Larangan is used as water resource for wet-rice field. In this matter, the commitment of local community to take

care of the sustainability of Lubuk Larangan reducing potential conflict on the water resource allocation.

Lubuk Larangan in Kota Padang Padang and Padang Pariaman provide contribution on rural economic development in two categories. First, direct contribution. All Lubuk Larangan in Padang and Padang Pariaman except Lubuk Larangan Surau Gadang in Padang provide direct contribution on the development rural public facilities like mosque, *musholla*, etc. It is found that in amount of 70% to 85% of the production value of Lubuk Larangan is allocated as financial assistance for rural development. Such percentage allocation can be found at Lubuk Larangan Batang Kandis, Padang Alai, Kampung Sagit, Kudu Ganting and some other Lubuk Larangan. Second, indirect contribution. Some Lubuk Larangans are attractive for domestic tourist due to its good view and interesting fisheries resources. Besides, there is opportunity for swimming at certain part of water body near to Lubuk Larangan. This situation stimulates the development of informal sector which generates income for local community.

Other Contributions. There are some other important contributions of Lubuk Larangan namely, for fish conservation and building awareness of local community on environment improvement. It is clear, that Lubuk Larangan plays important role on fisheries resource conservation. Especially for certain scarce species like *garing* and *sidat* which are well known as high economic valuable fish. Generally, rural community has a long tradition on the management of the Lubuk Larangan in which wild fish resource are naturally conserved. In Padang, it is found that there is a relative new established Lubuk Larangan. As a Lubuk Larangan, it is forbidden to catch fish outside of the agreement of local community. There is a very positive impact of the establishment of this small aquatic ecosystem as Lubuk Larangan that is, everyone of the local community agrees to keep the environment of Lubuk Larangan free of rubbish (Figure 4).



Figure 4. Lubuk Larangan Banda Ikur Koto in Padang City

Beside above contribution, there is an opportunity to increase the contribution of Lubuk Larangan for social economic development in rural area. The opportunity is by introducing small cage aquaculture at the Lubuk Larangan. Munzir (2011) mentioned that an initiative or a trial has been done by an inhabitant living in Sub District Surau Gadang but it did not yet work well (Figure 5) and the owner then took it out of the aquatic ecosystem. There should be consideration and discussion amongst the stakeholder before using an aquatic ecosystem of Lubuk Larangan for a private advantage use.



Figure 5. A small cage aquaculture which was introduced to Lubuk Larangan Surau Gadang

Policy Implication and Conclusion. There are some studies regarding the degradation of ecosystem which have correlation with the degradation of local wisdom. For instances, studies from Prijono (2000) and Zulkarnain (2007). Both mentioned that maintaining local wisdom is important for sustainable utilization of natural resources at coastal ecosystem. Arif (2005) stated that for Mandailing society in North Sumatra Province, Lubuk Larangan is a capital for fulfilling social needs. This is the reason why fishermen at Singkarak Lake in West Sumatra cooperated to determine the protected area of endemic species of so called *bilih* fish (Osmond, 2006).

Developing rural aquaculture is an important solution for food and income security as well as poverty alleviation (Munzir 2001; 2002), Edward, Little, and Demaine (2002), and Munzir and Heidhues (2002). This is very reasonable, considering that 67% of Indonesian total population are living in rural area (Munzir, 2008).

The local wisdom and the role of Lubuk Larangan in rural area of West Sumatra on socio-cultural and economic development are still functional. Lubuk Larangan contributes to rural development directly and indirectly.

Although there was a tendency of degradation on the environment quality and the value of local wisdom due to community based management on Lubuk Larangan as well, the existence of both ecosystem and its local indigenous knowledge still play important role on social cultural and social economic development in rural area. For further benefit of the existence of Lubuk Larangan, it is necessary to develop strategic policy for the utilization of this local wisdom which could provide suitable response on the important issue at rural area i.e. fulfilling social economic need under sustainable utilizing of natural resources. This should not be restricted for rural area in West Sumatra only but also for wider region in Indonesia. Such policy would be effective if it is supported by rural stakeholder. Hence, local wisdom could be considered as an entry point for this purpose.

REFERENCES

- Arif, A. 2005. Lubuk Larangan, Modal Sosial Masyarakat Mandailing. www.google.com
- Dinas Kelautan Dan Perikanan (Dkp). 2008. Himpunan Surat Keputusan Bupati Dan Walikota Di 14 Kabupaten/Kota Provinsi Sumatera Barat Tentang Penetapan Lubuk Larangan. Dkp Provinsi Sumbar. Padang.
- Edwards, P.; D.C. Little And H. Demaine (Editors). 2002. Rural Aquaculture In Asia. Cabi I Publishing, Wallingford, Uk.
- Munzir, Abdullah. 2001. Technical Efficiency Of Small Fish Farmer's Production In West Sumatra, Indonesia. A Stochastic Frontier Analysis On Floating Net Cage Aquaculture. Verlag Grauer Isbn. 3-86186-379-0, Germany. Website: <http://www.grauer.de>.
- Munzir, Abdullah. 2002. Towards A Technological Efficient Production Of Rural Aquaculture. Paper Presented At International Seminar In Chiang Mai, Thailand 8-12 January 2002.

ISBN 978-979-792-665-6

International Proceeding

- Munzir, Abdullah And Franz Heidhues. 2002. Towards Sustainable Development Of Floating Net Cage Culture For Income Security In Rural Indonesia: A Case Study Of Common Carp Production At Lake Maninjau, Indonesia. In Edwards, P.; D.C. Little And H. Demaine (Editors). 2002. Rural Aquaculture In Asia. Cabi I Publishing, Wallingford, Uk.
- Munzir, Abdullah. 2008. Membangun Perikanan Budidaya Pedesaan. Bung Hatta University Press. Padang.
- Munzir, Abdullah. 2011. Studi Sistem Pengelolaan Dan Potensi Pemanfaatan Kearifan Lokal "Lubuk Larangan" Di Kota Padang Dan Kabupaten Padang Pariaan, Smatera Barat. \
- Osmond, Dodi. 2006. Perilaku Nelayan Dalam Pemanfaatan Sumberdaya Ikan Bilih (*Mystacoleucus Padangensis Blkr*) Di Nagari Paninggahan Kabupaten Solok. Tesis S2 Program Pascasarjana Universitas Negeri Padang. Padang.
- Prijono, S.N. 2000. Memanfaatkan Satwa Dan Puspa Secara Berkelanjutan. Warta Kehati. Oktober-November 14-15.
- Syandri, Hafrijal. 2007. Konservasi Dan Rehabilitasi Sumberdaya Alam. Bung Hatta University Press. Padang.
- Syandri, Hafrijal. 2014. State Of Aquatic Resources Lake Maninjau West Sumatra Province, Indonesia. Journal Of Ecology And Environmental Sciences. Issn 0976-9900 And E-Issn: 0976-9919, Volume 5, Issue 1, 2014, Pp.- 109-113.
- Zulkarnain. 2007. Kearifan Lokal Dalam Pelestarian Sumberdaya Pesisir. Studi Kasus Di Desa Panglima Raja Kecamatan Concong Kabupaten Indragir Hilir Provinsi Riau. Tesis S2 Program Pascasarjana Universitas Andalas. Padang.