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The local wisdom in marine resource  
conservation for strategies of poverty reduction in  
Indonesia

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**Doctoral Dissertation**

**THE LOCAL WISDOM IN MARINE  
RESOURCE CONSERVATION FOR  
STRATEGIES OF POVERTY REDUCTION IN  
INDONESIA**

**March 2019**

**LUCKY ZAMZAMI**

*To the Villagers of South Tiku*

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## **PREFACE**

In many communities, fishing does not provide us not only fish and work, but also cultural identity and community. The term ‘fishing community’ could refer geographically to a place where fishermen and their wives live, or more abstractly to a community based on fishery, ocean resources, maritime values, and others. The fishing community as a community, which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, includes fishing vessel owners, operators, and crews that are based on such community (Ginkel 2007:5-7; Kusnadi 2010:82)

Fishing communities are referred in the context that the construction of social and cultural life of society is significantly affected by the existence of social groups whose survival strategies depend on the utilization of marine and coastal resources. By paying attention to the structure of economic resources environment which is the basis of survival strategies and each fishing community as a social unit has a cultural identity that is different from other social units, such as farmers in the lowlands, cultivators in the dry land and the highlands, communities around the forest, and other social unit that lives in urban areas.

For the community, culture is a system of ideas or cognitive system that serves as a guide to life, i.e. the reference patterns of social behavior, as well as a means to interpret and make sense of the events that occur in the environment (Keesing 1989: 68-69; Kusnadi 2010:2). Any ideas and cultural practices must be functional in society. Otherwise, the culture would be lost in the not too distant future. Culture should help the survival ability of society or individual adjustment to his environment. As a guide

to action for citizens, cultural contents are a formulation of goals and the means used to achieve that goal which is agreed by society (Kluckhohn 1984:85-91). Anthropological perspectives are explaining the existence of the community starts and the results-oriented dialectic relationship between the environment and culture. In various environments surrounding human life, therefore, a social unit formed through such a process would provide the characteristics of different cultures.

In much of the literature I have seen, culture is defined as an attribute, such as structure and strategy. Culture is seen as an independent variable that could be manipulated through management interventions in order to achieve organizational goals (Hudelson 2004:345-346; Scott et al. 2003:111-118). Anthropology takes quite a different approach to culture. It defines culture as the shared set of values, ideas, concepts, and rules of behavior that allow a social group to function and perpetuate itself. Rather than simplifying the presence or absence of a particular attribute, culture is understood as the dynamic and socially constructed evolving reality that exists in the minds of social group members (Hudelson 2004:345-346).

Anthropologists have traditionally used a qualitative research approach to study culture, and such an approach is well suited to many of the complex questions confronting researchers who are interested in culture. More than just a set of data collection methods, qualitative research is an approach which seeks to understand events, actions, norms, and values from the perspective of the people who are being studied. It emphasizes the context and the ways how features of a specific situation or setting impact upon the phenomenon under study. Because qualitative research tends to be flexible and interactive, it allows for the discovery of unexpectedly important topics which may not have been visible; the researcher has been limited to a pre-

defined set of questions or data collection methods (Hudelson 2004:345-346; Brown 1995).

The culture of the communities has created traditions that reflect the activities of religion or belief through the role of social institutions based on the local community. In Indonesia, the ethnic group of Minangkabau, who is an indigenous culture of the Province of West Sumatra, has the world's largest matrilineal society. With a complex social structure based on matrilineal clans and property, such as land and houses, its inheritance goes through female lineage. Islam entered the Minangkabau area since the early 16th century through 2 routes: one was from the Malacca Sultanate through the way of the Siak and Kampar rivers at the east coast of Sumatra, and the other was, through the way of the west coast of Sumatra, which was dominated by the Kingdom of Aceh in the late 16th or early 17th centuries (Dobbin 1974:319-56; Hamka 1950:34). The Minangkabau heartland consists of 3 different regions, viz. Agam, Tanah Datar, and Limapuluh Kota, which is called collectively, in the Minangkabau language, the Three Regions or Luhak Nan Tigo (Abdullah 1972:22).

Many researchers conducted their research works among the Minangkabau, but its west coastal area is still a frontier (Dobbin 1983:42-46). The geographical and political entity under the Minangkabau King of Pagaruyung, known as the King of the World, exercised power there at political and secular aspects of life (Radjab 1954:12). Geographically, the Minangkabau has been the most developed at each rural settlement, generally comprising a large village with its satellite hamlets and a council of the lineage chiefs which presides over the affairs of the village (Graves 1981:5). Each village unit has a mosque, public bathing places, pathways, a cockpit, and a council hall for the leaders (Young 1994: 51).

Research on the new developments in economic life and the problems of social reorganization in the ethnic group of Minangkabau was first paid attention by M. Joustra (1923). F. von Benda-Beckman (1979:39-45) reviewed his study attempts to make a contribution to the systematic study of inheritance and to give a detailed statement for Minangkabau society. Some recent findings have supported Benda-Beckman's work and agreed the inheritance system of Minangkabau society (Benda-Beckman 1984:1-13; Kahn 1976:1-18), or the images on the Minangkabau tradition (Kahn 1993:1-93). L. C. Westenank (1918:21) highlighted the result of the growth of the population of the clan disintegrated into hamlets or lineages. Benda-Beckman (1979) theoretically emphasized the need for research to look at the social function on the socio-political organization of the village as a system of the Minangkabau socio-political organization and at the Minangkabau system of property relationships and inheritance. J. S. Kahn (1976) researched the insights generated by Marxist theorists, by means of a concrete case study of a peasant village in the Province of West Sumatra. T. Kato (1982:193-199) saw that its migration (*merantau*) was the activity to travel out of their village to search for a better life, education, and experience. F. K. Errington (1984) analyzed a means of understanding the Minangkabau consciousness. Recently, N. Effendi (1999) analyzed its most important economic institutions or rural market and its way of life that forces communities to undergo social, cultural, and political transformations on the subsistence economy of Minangkabau peasants. This study was an addition to the growing body of qualitative work undertaken to look at the nature of outdoor experiences from an ethnic perspective of Minangkabau scholar.

The environmental issues are concerned globally these days. In particular several insular nations, including Indonesia, are extremely interested in the marine

conservations and their managements. In addition to the general ethnographical description of the Minangkabau, what I would like to explore in this dissertation is the establishing marine conservation area, which has an essential role in supporting sustainable fishery management, on the western coast of Sumatra, Indonesia. The western coast of Sumatra has been inhabited by the ethnic group of Minangkabau, which has been translated as ‘tribe’s people’ or ‘indigenous people’ in the region. They recognize that there is the local wisdom in the local marine conservation and the local wisdom has potentially established the marine resource conservation on the coastal communities on the western region of Indonesia for strategies of poverty reduction. Since former days, the local wisdom issues and socio-economic concerns of local fishermen have not been properly considered by any anthropologists. To study such issues and concerns demonstrates that marine resource conservation-related activities are a major part of the strategies of poverty reduction of coastal communities in and around the coast of the west of Sumatra. In this process, local fishers adopt the government image of the Minangkabau people and try to demonstrate their position in the state administrative system. Why do they begin demonstrating their position as the Minangkabau people? How do they interpret and manifest their local wisdom? How do they adopt the government image about their conservation programs? Combining the relation between the local wisdom and marine conservation activities based on an outsider’s image, I shall argue that the local wisdom is a perspective drawn upon the indigenous or local knowledge that becomes the basis of cultural identity through the government development program. I would like to explore the transactions between the cultural identity and the government program in the context of the ethnic group of Minangkabau.

## **Fieldwork and Methodology**

This research, on which this dissertation based was conducted by myself and helped by department colleagues at the village of South Tiku along the Tiku coast, Tanjung Mutiara District, Agam Regency, the Province of West Sumatra, Indonesia, from August 2016 to September 2017. Thus, all the statistics in this dissertation was taken as accurate on January 2016, unless otherwise specified.

Most of my interviews were conducted through an unstructured fashion. When I visited villagers' houses, I did not have many fixed questions in my mind, and I carried on conversations about everyday things without trying to pre-determine their directions. If there was something interesting in a particular context, I tried to explore the topic further. In this way, I tried to document as well as explicate their complex views of their world and, at the same time, engaged with these views as emerging in a form closely related to their everyday life. In parallel with these unstructured interviews, I conducted a structured survey on the family members and their backgrounds in the village of South Tiku. This survey was necessary for the purpose of clarifying occasional moves, questions of individual descent, kinship, and marriage patterns in their clans.

Beyond interviews and surveys, however, it is important to emphasize that it was villagers' readiness to share with me their everyday lives that mattered. I had the opportunity to discuss and observe these lives in many different situations, such as spending time over drinking cups of tea or coffee in a local coffee shop (*warung*); I was allowed to learn something about their activities and hopes and, perhaps, to share in them a little as well. To that experience, I was, am, and will be eternally grateful.

My ethnographic direction is to bring together the government's images and interventions of the Tiku people and their adoptions and engagements with these official images and interventions. As a result of this engagement, people along the Tiku coast have conceptualized and started to reconfigure their identity, habits, categories, and authenticity in their local wisdom. In this dissertation, I shall explore how the Tiku version of the Minangkabau has been introduced, what has emerged as a result of this introduction, and what kind of actions are emerging in relation to these facts.

### **Structure of the Dissertation**

The aim of this dissertation is to analyze the local wisdom for the establishment of marine resource conservation at the coastal communities on the western region of Indonesia for strategies of poverty reduction. In addition, its subsidiary aim is to present practical recommendations which would minimize the negative impacts of marine resource conservation and optimize the benefits for local fishermen. This ethnographical dissertation mainly treats the village of South Tiku, Tanjung Mutiara District, Agam Regency, the Province of West Sumatra in Indonesia, based upon one-year field research along the Tiku coast. The local wisdom reflects the Muslim way how Minangkabau fishermen makes use of the marine resources for obtaining a welfare living, and how in a society of the village of South Tiku they have great opportunities to be managed and to be empowered to regulate the daily lives for everyday people and the norms and rules that favor to the environment, in the context of marine resource conservation.

This ethnographical dissertation consists of 7 chapters. In Chapter I, the introductory information concerning ethnographical setting, such as geography,



population, language, migration of the Minangkabau, is provided. Chapter II discusses the most important social and political unit of the Minangkabau village, which has the long historical background from the colonial times. Chapter III provides some anthropological problems of the Minangkabau matrilineal descents group, which is the most noticeable characteristic of their social organization. Chapter IV is concerned with special features in fishery activities and natural environment in Indonesia and the Province of West Sumatra. Chapter V presents the problem of the marine and coastal resources in the village of South Tiku, which is vividly related to their livelihood and household welfares. Chapter VI is concerned about some conditions in marine resource conservation and strategy for the poverty reduction in local fishermen's community, with the aspects of the local wisdom. The final one, Chapter VII, draws conclusions. This dissertation would predict the further necessity of future marine resource conservation along the Tiku coast, which could improve the balance between marine resource conservation goals and poverty reduction outcomes.

## **CHAPTER I**

### **INTRODUCTION**

#### **1. Background**

Coastal ecosystems and human resources are globally deteriorating, due to human and natural causes (Halpern et al. 2008:948-952; Fitriana 2014:1-2; Zamzami 2011:5). The degradation of coral reefs is observed everywhere (Wilkinson 2004; Burke et al. 2002:19). The area of mangrove forest decreased from 18.8 million hectares in 1980 to 15.2 million hectares in 2005 (FAO 2007:35), and the commercial over-fishing decreased fishery stocks (Srinivasan et al. 2012:544-549; Swartz et al. 2010:151-43). FAO (2005:235) reported that 52% of the 441 fishing stocks all over the world were fully exploited, 17% of these fishing stocks were overexploited, and 7% were depleted. Myers and Worm (2003:280-283) reported that the oceans had lost more than 90% of their large predatory fishes on a global scale. Some scholars have suggested that fishing efforts need to be reduced to 20-50% worldwide (Srinivasan et al. 2012:545; Fitriana 2014:3).

Millions of people globally depend on marine resources to make a living (Allison and Ellis 2001:377-388; Ermayanti 2014:15; Fitriana 2014:4). Fish is an important source of protein in local diets, and fishing-related activities provide jobs and incomes (Allison and Ellis 2001:377-388; Pomeroy et al. 2004; FAO 2004:8). In particular, small-scaled coastal fishery provides food security, a source of cash income, and other benefits to men and women (Harrison 2000:13; Kronen 2002:24; Williams 2008:180-185; Teh et al. 2009:807-817; Walker and Robinson 2009:467-484; Crawford et al. 2010:5-11; Weeratunge et al. 2010:405-420). Fish and marine

products also buffer people's livelihoods during economic or environmental shocks (Béné et al. 2007:55; Nam and Bunthang 2011:91).

Marine resources also hold social and cultural values such as the local wisdom for people. In many cases, marine resources are the foundations of people's everyday lives, cultural identity, and material sustenance (McGoodwin 1990:235; Maloney 1994; Johannes and Hviding 2000:22-29; Pollnac et al. 2001:455-531; Thornburn 2000:1461-1479; Marschke 2005; Hviding 2006:253-269; Onyango 2011:55). Small-scaled fishing could be a risky occupation, but fishers enjoy being independent and working outdoors (Acheson 1981:275-277) and sometimes it is difficult for them to change their occupations (Pollnac et al. 2001:455-531; Cinner et al. 2009:124-130; Slater et al. 2013:22-30; Fitriana 2014). The fishing activities in uncertain conditions influence the behavior of fishers through ritual and magic (Acheson 1981:287-288) and social control within the community (West and Brockington 2006:251-277). In the Pacific, the customary ownership systems for marine resources and their associated customary laws are important features that maintain kin network receiving the most benefits and exclude outsiders (Henley 2008:273-290; Hviding 1998:253-269; Kinch 2006; Aswani 2005:285-307; Cinner and Aswani 2005: 124-130; Tungale 2008; Foale and Manele 2004:373-386; Fitriana 2014:7). In addition, maintaining strong social relationships with middlemen plays a role in reducing risk, too (Acheson 1981:289-290).

Given the widespread marine resource depletion and the need to maintain the benefits of marine resources for people, it is essential to sustain viable fish stocks and ecosystems. Global concerns about the need to conserve marine ecosystems have resulted in rapid growth of the establishment of formally protected marine

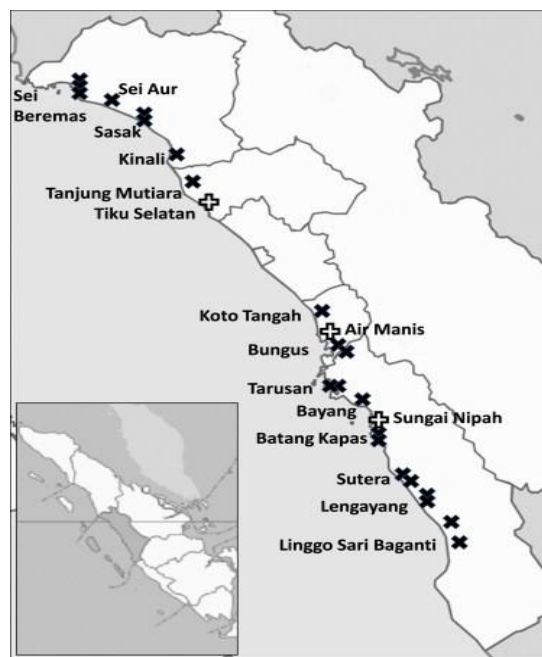
conservation areas. The total area of protected ocean rose by over 150% from 2003 to 2010 (Fitriana 2014:8; Toropova et al. 2010). In 2010, there were approximately 5,880 marine protected areas, covering over 4,200,000km<sup>2</sup> of the ocean (Fitriana 2014:9; Toropova et al. 2010). In Indonesia, the size of marine conservation area initiated by the Ministry of Marine Affairs and Fisheries covered 733 hectares in 2003 which had increased to around 20 million hectares in 2016. At the meeting of the 2010 Convention on Biological Diversity in Nagoya, the targets were set for the loss of biodiversity in order to ensure that ecosystems provide essential ecosystem services. The target includes the conservation of 10% of global coastal and marine areas through effectively and equitably managed programs by 2020 (Fitriana 2014:9; Herkenrath and Harrison 2011:1-2).

The Province of West Sumatra, one of 34 Indonesian provinces, represents approximately 1% of the area of Indonesia. It consists of about 100 islands, some 1,400km of coastline, and 20,000km<sup>2</sup> of territorial waters. The EEZ of the Province of West Sumatra is about 140,000km<sup>2</sup> and 6,000 fishers operate in the waters (see Figure 1). The coastal area is regulated under the control through laws and regulations, which are mainly national but also some regional ones. There are 26 existing regulations that directly concern marine matters (Kunzmann 2002:4-10).

Several years of my research along the coast of the Province of West Sumatra coast have resulted in the insight into problems with the implementation of regulations in the compilation of some scientific information. Along the coast of the Province of West Sumatra the significance impacts on the coast are found; 1 million inhabitants and their sectoral activities such as agriculture, forestry, and mining are collectively causing heavy sediments, fertilizers, wastes, and sewage loads, which are washed

down in rivers to the coastal areas. Illegal fishing is also practiced in artisanal fishing areas, which overlaps largely with fishing with platforms (Kunzmann 2002:4-10; Sofyani 1994:5; Abdurrahman 1995:41; Evarita 1995:85; Siregar 1995:81; Syufri 1995:78). In addition to the use of destructive fishing methods, the unwise use of marine resources, which includes shell and coral mining (Syarif 1994:61) and harvesting of turtle eggs and adults (Hendra 1997:19; Setiawan 1999:34), is seriously increasing. The Province of West Sumatra faces the problem of fishing with explosives and cyanide, on both small and large scales (Kunzmann 2002:4-10; 1997a:1249-1262; 1997b:2-9; 1998:19-22).

**Figure 1. Coast along the Province of West Sumatra**



The marine resource areas in the Province of West Sumatra also hold social and cultural values for local people. In many cases, marine resources are the foundations of people's everyday lives, cultural identity, and material sustenance. The

Province of West Sumatra has one of the most potential industrial fishery zones in Indonesia, which extends about 375 km of the coastline.

## **2. Ethnographical Setting**

The Province of West Sumatra is the homeland of the ethnic group of Minangkabau. They form the largest matrilineal society in the world (Metje 1995:23; Abdullah 1972: 172-245; Kato 1982:50-61). According to an official statistic (BPS-Statistic of West Sumatra 2017:5), there are more than 5 million Minangkabau people who reside in the Province of West Sumatra at the central highland and along the west coast facing the Indian Ocean. The name of Minangkabau is found in a legend, in which the name was derived from triumph in an unusual battle with Javanese invaders in the 14th century (Westenenk 1918:3-4; Willinck 1909:9-12).

The center of the Minangkabau culture is the highland of the Province of West Sumatra. This highland is traditionally divided into 3 regions, viz. Agam, Tanah Datar, and Limapuluh Kota (Kato 1982:36). These 3 regions, including the coastal areas of the Province of West Sumatra, are regarded as countryside (*rantau*). The term of countryside is used in this dissertation, but it is a quite problematic term (Kahn 1993:1-29). The traditional way of life of the Minangkabau was introduced by the legendary ancestors named Datuak Katumanggungan and Datuak Perpatih nan Sabatang. Both legendary ancestors possessed different leadership principles: Datuk Ketemenggungan rules or the Koto Piliang custom by autocracy, while Datuk Perpatih rules or the Bodi Caniago custom with democracy (Is 2000:7; Widya 2001:8).

The different leadership principles are defined by a matrilineal way of life among the ethnic group of Minangkabau. This means there are certain kinship groups

which follow the female descent of a mother. The woman's brother is responsible for her children rather than her husband. In a simple way, the lineage system in the highland of the Province of West Sumatra consists of clans which are divided into subclans, lineages, and sub-lineages. As for the classification of such terms, every researcher explains differently. For example, 'the house is the home of a lineage' or 'one mother with her daughters live there'.

In the Minangkabau history, Adityawarman as a Javanese king sent a message to Pagaruyung kingdom that he would come to their land. Adityawarman proposed a buffalo battle and prepared a large bull buffalo. Attaching sharp knives to calf's small horns, the Sumatrans released the calf as their representative which thought the large bull buffalo as its mother. The Javanese bull buffalo began to suckle the calf with hungry at its belly, was stabbed by the knives deep into its own belly, and was killed. The victors took their name from this triumph, i.e. victory (*minang*) and buffalo (*kerbau*) (Koentjaraningrat 1975:34; Westenenk 1918:5-6). Although this story is told as more than truth of our sense, the buffalo's horns are found in the unique sweeping roof points of traditional Minangkabau houses and the hornlike projections of women's ceremonial headdress. A more prosaic contemporary explanation is that the term Minangkabau is derived from their traditional big house (*rumah gadang*) (Loeb 1935:5).

Minangkabau as one of the major ethnic group in Indonesia is influenced by the globalization itself. This ethnic group is known for its dynamic ethnic culture. Minangkabau people are used to traveling around, or to leaving their homeland to seek a better life, education, and experience. This migration tradition (*merantau*) is a common activity for young people among the Minangkabau (Franzia et al. 2015:44-

49). Through the activity of migration, Minangkabau people take their culture and tradition to their new land. This tradition is always the base of the Minangkabau culture. The Minangkabau people need to be rooted to their culture because it constructs from their identity. Therefore, the traveler is still connected to their villages and clan, and the traveler is always find the way to go back home.

The Province of West Sumatra is a predominantly agricultural area. The main subsistence crop is rice, which is cultivated on irrigated and dry lands. Coffee, cinnamon, nutmeg, and chili peppers are grown as cash crops. Some villages specialize in crafts for living such as weaving, making baskets, embroidering, blacksmith, and so forth. Coastal villages have such specializations as well, but some villagers engage in sea fish trade and some women help them. Most villages in the coastal area have fish ponds. Such fish is generally for sold. The village called *nagari* or *desa* is the lowest level of state administration, which usually comprises several hamlets (*jorong* or *kampung*), often having a considerable population. A large village has occasionally some 10,000 inhabitants.

### **3. History of the Minangkabau: Pre-colonial and Colonial History**

The book of the Minangkabau history (*tambo*) tells us that about the Minangkabau arrived by ship and landed on Mt. Merapi, of which size was not bigger than an egg, protruding from a surrounding body of water. After the water receded, the Minangkabau proliferated and dispersed to the slopes and valleys surrounding the volcano, which became the region called the highland (*darek*). According to the history, the ship was sailed by a descendant of Alexander the Great (Joustra 1923:1-42).



At the middle of the 14th century, this area became a kingdom under the rule of Adityawarman (Josselin de Jong 1952:7-14). Probably, he was an officer of the Kingdom of Majapahit (Poesponegoro and Notosusanto 2008:17) with Minangkabau blood (Toeah 1989:22-34). Researchers have different opinions about the fact whether his religion was Hinduism or Buddhism, but it is clear that a new power entered the highland and that the following pair of dichotomous oppositions appeared.

The customary law (*adat*) always accepts some opposing elements, but not all new elements become parts of the village community. There are indications that some elements of a Hinduism or Buddhism civilization could be found in parts of the Province of West Sumatra. In 2002, archeologists found 6 Hindu and Buddhist archeological sites in Payakumbuh (Kasparman 2002:34-35). Nonetheless, this number is still small. M. S. Heidhues has one opinion that Adityawarman followed Tantra form Buddhism (Heidhues 2000:5-22). Probably this new religion was related to the kingdom with its autocratic rules whilst a whole customary law tradition (Bodi Caniago) was more democratic and egalitarian. The other customary law tradition (Koto Piliang) was more hierarchical. The original 4 clans of the Minangkabau were called Koto, Piliang, Bodi, and Caniago. They are belonged together in pairs (Josselin de Jong 1952:12; Benda-Beckman 1979:57-61). Both pairs followed their own customary law tradition. Usually, a village community follows either of these 2 traditions. This means that either the Koto Piliang or the Bodi Caniago groups occupies the dominant position in that village community (Josselin de Jong 1952:12; Benda-Beckman 1979:57-61). The Bodi Caniago custom was prevalent in Agam region, whereas the Koto Piliang custom was prevalent in Tanah Datar region (Kraus

1984). This was probably the reason why the king was in the Pagaruyung, Tanah Datar Regency.

The main feature of the pre-colonial period was the appearance of a new religion, namely the religion of Islam. The Sultanate of Aceh played a crucial role in the Islamization of the west coast of Sumatra. Gold and pepper were extremely important for Aceh and the Acehnese attempt was made to control their trade. Therefore, the Acehnese Sultan, Alau'd Din Ri'ayat Shah, sent his son, Mughal to the harbor of Pariaman. With him a new religion, i.e. the religion of Islam, appeared in the Province of West Sumatra. For the further spread of Islam, the brotherhoods (*tarekat*) played a major role. They had their own networks and slowly the Islamic scholars built their own networks, too. One scholar could be an expert in Islamic law, whilst another could be an expert in Arabic. The students moved from place to place in order to study. The new religion spread gradually from one area to another. The life in the highlands was not safe for the merchants and travelers, as robberies and thefts were a daily occurrence (Dobbin 1974:60-70). As a consequence, Islamic scholars became increasingly stern in implementing the Islamic law. In the 19th century, the Padri movement became very influential. Its founders were pilgrims from Makkah, who wanted to abolish the customary law when they came back to their Minangkabau villages. They secured power in certain regions. Finally, one Padri leader named Tuanku Lintau decided to have a feast, in which he and his followers killed most members of the Sultan's family. His 2 sons managed to escape and asked the Dutch for help (Dobbin 1974:79-86). The Dutch decided to intervene; this was the beginning of the Padri war from 1821 to 1837.

The consequence of these historical developments made the Islamic interpretation more orthodox, which could be seen now in the daily life of Minangkabau. New positions such as a Muslim leader (*imam*) became more visible in many villages. Islamic rules like 5 daily prayers became an essential part in the life of the people. Some parts of the customary law were ignored or abandoned, while other parts followed Islam. The customary law representatives were more challenged than before. Therefore, the customary law accepted and institutionalized the dichotomous ways. It must be stressed that the concept of the customary law mainly accepts the male view (Sanday 2002:11-13). So, it could be presumed that headmen (*penghulu*) could decide whatever they want. However, the Islamic elements gradually entered the customary law side. For example, the clans started to be considered more related to the Islamic values and therefore the children should receive an Islamic education in prayer houses (*surau*) (Radjab 1954:7).

The customary law could accept the new elements as long as certain core elements remained untouched. The year of 1837 marked the end of the Padri war and the Dutch became influential in the highlands of the Province of West Sumatra. The Netherlands decided to strengthen the customary law representatives. The most important thing for the colonial power was to secure a high profit. New posts were created, which helped to control the coffee trade. The world of the Minangkabau became part of the world economy with the introduction of money-based trade. New ideas and ideologies were imported into the interior of the Province of West Sumatra. Communist ideas also became widespread which culminated in a communist rebellion in 1927. At the religious level, there were new reform ideas which soon became

popular. The younger generation promoted these ideas, and the customary law itself became divided, but it was still influential and could maintain the traditional lifestyle.

C. Dobbin (1983:161-192) in her comprehensive study of the Padri movement argues that the changing economic pattern in Agam and Limapuluh Kota Regency provided the catalyst for the emergence of the Islam movement. Although there was booming demand for the products from the foreign traders, the condition in southern Agam region was not conducive to the conduct of commercial activities due to the social inability to provide a secure trading network. According to Dobbin (1983:161-192), primarily there some waylaid traders robbed villagers of their goods or even, in the worst cases, abducted them and sold them to east coast traders. Apart from these acute bandit problems, individual morality also served as a stumbling block for the development of trade. For example, many larger village markets, which had the potentials for becoming bulking points for cassia and coffee, were too often involved in cockfighting and its concomitant, gambling (Dobbin 1983:161-192).

E. E. Graves (1981:29-49) mentions that the Minangkabau representation among the political, intellectual, and professional elite of the new Republic of Indonesia is by far exceeded in comparison to their 3% of the total Indonesian population. The roots of the Minangkabau achievement lay in their reaction to the emergence of Dutch colonial rule in the mid-19th century, which lasted until the Padri War and the new era of Indonesian independence. This review explains the unique of the matrilineal system among the Minangkabau. In the matrilineal system, the Minangkabau social formations participate in economic peasant for subsistence and global or market economies. The rural market in the Minangkabau area forced them to transform their way of social, cultural, and political life transformations, on which

used to be depended by the subsistence economy of Minangkabau peasants. Even now, the Minangkabau has social response into the global economy. There is the impact of larger market mechanism on the social structure of the local community. The nature of an underdeveloped peasant economy among the Minangkabau people seems to be more stronger when it faces the global economy, having the welfare for the matrilineal system.

In Minangkabau customary law, the maintenance of property relationship and the social continuity of described property through time among the Minangkabau have been changed. Minangkabau people look at the consensus for justice and the state courts for the kindness of role, morality, and religion. Understanding migration in transforming Minangkabau traditions is related to the property relationship, in which property and land are passed down from mother to daughter while religion and political affairs are the responsibility of men. One case of the Minangkabau migrations has been seen at Negeri Sembilan in Malaysia, and it has been conducted through the activity of migration, where the ethnic group of Minangkabau takes their culture and tradition to their new land.

Minangkabau people know the narrative poetries at marriage rituals, open-air theatres (*randai*), and the singings of tales (*kaba*). During weddings and other ceremonies, this Minangkabau verbal art are practiced, listened, or exchanged as ritual speeches. As for the Minangkabau singing (*Sijobang*), it is sung in various local dialects, and it is used for everyday; the informal speech is always given to the singing of narrative poem about a hero named *Anggun Nan Tungga*. The story of *Anggun Nan Tungga* is performed both as a drama and as a singing narrative. In addition,

Minangkabau queens, such as Kaba Cindua Mato, are still celebrated in many old legends; the formal narration of Kaba Cindua Mato could last consecutive 17 evenings.

#### **4. After Independence and Reformation**

The independence movement was absolutely influential among Minangkabau intellectuals. Many famous independence heroes such as Sutan Syahrir, Haji Agus Salim, or Mohammad Hatta, were born in the Province of West Sumatra. This was the result of the fact that the Dutch promoted their school system in this area. The Dutch school system in the Province of West Sumatra was quite widespread, but it still had no effect at the village level.

In the following years, it became obvious that the Minangkabau was a part of greater Indonesia. On 17th August 1945 the independence of the Republic of Indonesia was declared. When Indonesia finally achieved independence in 1949, it was not easy for the local Minangkabau people to adjust their traditional way of life into the bigger state. Therefore, even the rebellion occurred in 1958, but it was soon suppressed (Mossman 1995:299-314).

The Minangkabau lifestyle has been changed dramatically since 30 years ago. The fact that the customary law has become less important has been recognized. If we see it only from a 'superficial' way, this could be seen as correct. For example, the number of traditional houses have been decreasing (Gura 1983:22), and the importance of the traditional councils seems to have been decreasing, either. According to J. van Reenen, the autonomy of the village and the prestige of the village council have greatly diminished through the combination of external and internal factors, or notably

through the intervention of the colonial and post-colonial government and the massive outflow of the customary law in 1990 (Reenen 1996:22-25).

The central government has tried to restructure the administration system; each Minangkabau village should be the similar and comparable village unit throughout Indonesia. This Indonesian administrative village unit is *desa* (Kato 1984:99-102). Some anthropologists predict that the traditional way of life would disappear (Maretin 1961:168-195; Swift 1985:346-355), but when we see the developments after the 1990s, then we may well have a different impression. During these years, the provincial government introduced the teaching subject of Minangkabau culture into schools. Such text books contain different parts of the Minangkabau culture (Syamsir 1995:34). In the Province of West Sumatra, furthermore, the titles and clan names are still important if someone addresses a clan representative.

The reformation movement started when New Order (*Orde Baru*) finished in May 1998; it marked the beginning of a new period in Indonesian history. After being ruled by authoritarian New Order regime for over 3 decades, Indonesia embarked for a new phase called Reformation (*Reformasi*). It was envisaged to be the starting period of a democracy with open and liberal politics, in which extensive autonomy would be transferred to the regions, away from the center, i.e. decentralization. The basis of this transition was formulated in a law which passed parliament in 1999, and it is called for the transfer of administrative powers from the central government to the regional districts.

The role of the central government is to be confined to matters connected to defense, foreign policy, fiscal-monetary and macroeconomic policy, justice, and religion. The fact that the regions would receive a larger share of revenues from the

regional reproduction of natural resources is important. Previously, regions had always left uncomfortable seeing the majority of earnings from local natural resources flow to stakeholders in the capital city of Jakarta. Since not every region in Indonesia is blessed with abundant natural resources, however, the gap between richer and poorer regions has increased.

In 1999, the central government promoted an autonomous regional government in the various districts. This policy wanted to support the numerous cultures and societies of the country. Under these circumstances, many local governments in the Province of West Sumatra promoted the unique Minangkabau way of life. The term *desa* (village in Indonesian) was replaced by the term *nagari* (village in the Minangkabau language) in 2001 (Sanday 2002:15). Many government buildings have adopted the traditional big house architectural styles. These are signs that the local government would like to promote their cultural aspects.

## **5. Social Geography**

The Province of West Sumatra lies between 0° 54' north to 3° 30' south and 98° 36' to 101° 53' east. The highest elevation is 1,006m above sea level in the city of Solok and the lowest one is 2m at the capital city of Padang. It is bordered by the Provinces of North Sumatra and Riau in the north and the east, while the west is the Indian Ocean. The Provinces of Jambi and Bengkulu are in the south (see Figure 2). In term of geographical position, the Province of West Sumatra lies in the middle of the west coastal area of Sumatra, having an area of 42,200km<sup>2</sup>, in which the largest Regency is the Mentawai Islands with 6,011.35km<sup>2</sup> (14.21%) and the smallest one is Padang Panjang with 23km<sup>2</sup> (0.05%) (see Table 1).



**Figure 2. The Province of West Sumatra**



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The marine fishery sector plays an important socio-economic role in the Province of West Sumatra. The Province of West Sumatra has the coastline of 450km, with the total sea area, including the EEZ, measuring 138,750km. In 2016, approximately 3.41% of the total populations of 4.4 million in the Province of West Sumatra were involved in the fishery. The number of fishermen increased from 2000 to 2016, but it declined thereafter. The body of marine fishermen constitutes about 21.86% of the total of fishermen population.

The Minangkabau highland is a part of the chain of Barisan Mountain which runs from north to south along the western side of the island, rarely more than 35km from the Indian Ocean. The mountains are dotted with longitudinal rift valleys, which form discontinuous troughs along the range. Blockage by volcanic debris in some of

the deeper depressions in the trough leads to the formation of spectacular mountain lakes such as Maninjau Lake or Singkarak Lake. Rainfall and water from mountain springs flow through the trough, which is drained primarily by rivers, flowing eastwards towards the broad alluvial lowlands of Sumatran east coast and then into the Straits of Malacca. The highland valleys and plains are the agricultural lands for much of the irrigated rice cultivation that is carried out in scattered areas throughout the island.

Today, the Province of West Sumatra is divided into 12 regencies (*kabupaten*), viz. Agam, Limapuluh Kota, Kepulauan Mentawai, Padang Pariaman, Tanah Datar, Solok, Solok Selatan, Sijunjung, Dharmasraya, Pasaman, Pasaman Barat, and Pesisir Selatan and 7 municipalities (*kotamadya*), viz. Padang, Pariaman, Padang Panjang, Bukittinggi, Payakumbuh, Solok, and Sawahlunto. Each regency is further divided into several districts (*kecamatan*) which are in turn composed of villages.

**Table 1. Total Area by Regency/Municipality in the Province of West Sumatra in 2016**

No.	Regency/ Municipality	Total Area (km <sup>2</sup> )	Percentage
(1)	(2)	(3)	(4)
<b>Regency</b>			
1	Agam	2,232.30	5.28
2	Kepulauan Mentawai	6,011.35	14.21
3	Pesisir Selatan	5,794.95	13.70
4	Solok	3,738.00	8.84
5	Sijunjung	3,130.80	7.40
6	Tanah Datar	1,336.00	3.16
7	Padang Pariaman	1,328.79	3.14
8	Lima Puluh Kota	3,354.30	7.93
9	Pasaman	3,947.63	9.33
10	Solok Selatan	3,346.20	7.91
11	Dharmasraya	2,961.13	7.00
12	Pasaman Barat	3,887.77	9.19
<b>Municipality</b>			
1	Padang	694.96	1.64
2	Solok	57.64	0.14
3	Sawahlunto	273.45	0.65
4	Padang Panjang	23.00	0.05
5	Bukittinggi	25.24	0.06
6	Payakumbuh	80.43	0.19
7	Pariaman	73.36	0.17
<b>Total</b>		<b>42,2947.30</b>	<b>100.00</b>

(BPS-Statistic of West Sumatra 2017:11)

## 6. Population

The population of the Province of West Sumatra in 2016 consisted of 5.26 million people with 2.62 million being male and 2.64 million being female (see Table 2). Compared to the previous year, the population figures increased to 632,400 people, with the ratio of 1.22%. The average population density in the Province of West Sumatra in 2016 totaled 124 people per km<sup>2</sup>. The densest region was in the city of

Bukittinggi with nearly 4,941 people per km<sup>2</sup>, with a stark contrast with the Mentawai Islands which consisted of only 14 people per km<sup>2</sup>.

**Table 2. Population and Population Growth Rate by Regency/Municipality of the Province of West Sumatra between 2014 and 2016.**

No.	Regency/ Municipality	Population (people)			Annual Population Growth Rate (%)	
		2014	2015	2016	2014- 2015	2015- 2016
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Regency					
1	Agam	472,995	476,881	480,722	0.82	0.81
2	Kepulauan Mentawai	83,603	85,295	86,981	2.02	1.98
3	Pesisir Selatan	446,479	450,186	453,822	0.83	0.81
4	Solok	361,095	363,688	366,213	0.72	0.70
5	Sijunjung	218,588	222,512	226,300	1.80	1.70
6	Tanah Datar	343,875	344,828	345,706	0.28	0.25
7	Padang Pariaman	403,530	406,076	408,612	0.63	0.62
8	Lima Puluh Kota	365,389	368,985	372,568	0.98	0.97
9	Pasaman	266,888	269,883	272,804	1.12	1.08
10	Solok Selatan	156,901	159,796	162,724	1.85	1.83
11	Dharmasraya	216,928	223,112	229,313	2.85	2.78
12	Pasaman Barat	401,624	410,307	418,785	2.16	2.07
	Municipality					
1	Padang	889,413	902,413	914,968	1.44	1.39
2	Solok	64,819	66,106	67,307	1.99	1.82
3	Sawahlunto	59,608	60,186	67,307	0.97	0.98
4	Padang Panjang	50,208	50,883	51,712	1.34	1.63
5	Bukittinggi	120,491	122,621	124,715	1.77	1.71
6	Payakumbuh	125,690	127,826	129,807	1.70	1.55
7	Pariaman	83,610	84,709	85,691	1.31	1.16
	Total	5,131,882	5,196,289	5,259,528	1.26	1.22

(BPS-Statistic of West Sumatra 2017:163)

The 66% people of the whole population of the Province of West Sumatra in 2016 lived in rural villages. The provincial capital and largest city in the Province of West Sumatra is the capital city of Padang on the west coast, with the population of just under 1 million. The age structure of the Province of West Sumatra highlights the young population age group category, where the percentage of young people (under 15 years) is high. The Province of West Sumatra encompasses 30.07% of the young population, while the elder one (60 years and above) is only 0.09% (see Table 3). The number of households in the Province of West Sumatra in 2016 amounted to as many as 1.25 million. The latter number was slightly increased from 2015 with 1.23 million households (see Table 4). The average number of household members in 2016 consisted of 4 people per household.

**Table 3. Population by Age Group and Sex of the Province of West Sumatra in 2016**

No.	Age Group	Sex		
		Male	Female	Total
(1)	(2)	(3)	(4)	(5)
1	0-4	277,750	267,609	545,359
2	5-9	272,201	261,532	533,733
3	10-14	256,611	245,612	502,223
4	15-19	243,477	236,784	480,263
5	20-24	218,268	215,895	434,163
6	25-29	205,473	201,146	406,619
7	30-34	189,116	189,218	378,334
8	35-39	177,118	182,082	359,200
9	40-44	168,727	169,834	338,561
10	45-49	148,476	152,492	300,968
11	50-54	130,428	138,241	268,669
12	55-59	115,129	123,050	238,179
13	60-64	88,652	92,396	181,048
14	65+	125,847	166,364	292,211
Total		2,617,273	2,642,255	5,259,528

(BPS-Statistic of West Sumatra 2017:166)

**Table 4. Number of Households and Average Household Size by Regency/Municipality in 2015 and 2016**

No.	Regency/Municipality	Household		Average Household Size	
		2015	2016	2015	2016
(1)	(2)	(3)	(4)	(5)	(6)
	Regency				
1	Agam	115,885	116,819	4.12	4.12
2	Kepulauan Mentawai	20,343	20,746	4.19	4.19
3	Pesisir Selatan	103,758	104,596	4.34	4.34
4	Solok	85,984	86,581	4.23	4.23
5	Sijunjung	52,769	53,667	4.22	4.22
6	Tanah Datar	87,141	87,362	3.96	3.96
7	Padang Pariaman	92,268	92,845	4.40	4.40
8	Lima Puluh Kota	92,616	93,515	3.98	3.98
9	Pasaman	63,397	64,082	4.26	4.26
10	Solok Selatan	38,408	39,113	4.16	4.16
11	Dharmasraya	53,983	55,483	4.13	4.13
12	Pasaman Barat	96,279	98,268	4.26	4.26
	Municipality				
1	Padang	210,881	213,815	4.28	4.28
2	Solok	15,530	15,813	4.26	4.26
3	Sawahlunto	14,864	15,010	4.05	4.05
4	Padang Panjang	11,891	12,085	4.28	4.28
5	Bukittinggi	29,676	30,182	4.13	4.13
6	Payakumbuh	30,563	31,037	4.18	4.18
7	Pariaman	18,173	18,384	4.67	4.67
	Total	1,234,409	1,249,403	4.21	4.21

(BPS-Statistic of West Sumatra 2017:167)

## 7. Climate

In 2016, the average air temperature of the Province of West Sumatra ranged from 24.30°C to 26.50 °C with average humidity around 78.6-86.4%. The average atmospheric pressure is 974.6-976.0mb with the average wind velocity with 2.2-3.0 knots (BPS-Statistic of West Sumatra 2017:7) (see Table 5).

**Table 5. Temperature, Humidity, and Velocity of the Province of West Sumatra in 2016**

Month	Temperature (°C)			Humidity (%)			High of Velocity (Knot)			
	Max	Min	Average	Max	Min	Average	Max	Min	Average	Direction
January	29.6	21.1	24.3	98.5	72.0	86.7	10	3	7	217
February	30.5	21.3	25.0	94.0	64.7	80.3	18	3	8	135
March	29.9	21.3	24.5	92.0	74.5	83.3	8	4	7	150
April	29.8	21.8	24.7	92.3	79.0	85.4	13	4	7	150
May	30.0	22.0	25.3	93.7	77.3	85.4	12	5	7	262
June	30.0	21.3	24.7	92.0	70.7	82.6	14	4	7	262
July	30.2	20.9	24.8	94.7	69.0	82.5	20	5	8	202
August	29.6	21.7	24.9	93.7	75.7	85.0	15	5	7	262
September	29.4	21.4	24.4	93.7	72.0	84.0	12	4	7	247
October	29.5	21.7	24.9	92.0	75.7	85.6	14	4	7	247
November	29.3	22.0	24.4	95.7	81.7	87.4	14	5	8	202
December	29.9	21.7	25.0	93.0	67.7	84.4	17	5	8	202

(BPS-Statistic of West Sumatra 2017:24-25)

The topography of the Province of West Sumatra is mostly mountainous and hilly from 200m to 3,800m. The Province of West Sumatra is crossed by the chain of Barisan mountain, which spreads from the north to the south of Sumatra. The Mentawai islands are also parts of this province. With high rainfall throughout the year, the Province of West Sumatra has abundant water for fish culture in ponds, rice fields, and open waters.

Indonesia straddles the equator and its climate is distinctly tropical. Seasonal variations in rainfall and wind direction are determined by the northwest and southeast monsoons. The heaviest rainfall throughout most of the archipelago comes with the northwest monsoon from November to February, when strong winds blow generally at

easterly direction (see Table 6). The southeast monsoon comes to Indonesia from June to August bringing relatively little rainfall, but winds and rough seas which adversely affect fishing operations along the entire shoreline of the Indian Ocean. Other fishing grounds are relatively sheltered during the southeast monsoon, but they are normally more exposed to winds of the northwest monsoon. The weather is relatively calm throughout the archipelago during transition periods between these two monsoons.

The marine environment in Indonesia is extremely complex. N. V. Polunin (1983: 455-544) reviewed a large body of literatures pertaining to this topic and noted that many groups of marine organisms reach the peak of speciation in Indonesian waters and reported some 2,500 species of fish to be present. Indonesia's marine environment is characterized also by great physical diversity, with extensive continental shelves in the center of the archipelago giving way to great oceanic depths in the Indian Ocean and the Pacific (Bailey et al. 1984:17). The coastal areas involve mangrove forests, seagrass beds, coral reefs, and estuaries (Burbridge 1983:263-280; Polunin 1983:455-544). Each of these coastal ecosystem by tropical climate sustain the human populations. Generally speaking, fishery resources within Indonesia are most densely concentrated in nearshore water.



**Table 6. Rainfall Average of the Province of West Sumatra in 2016**

<b>No.</b>	<b>Month</b>	<b>Rainfall (mm)</b>	<b>ETP (mm)</b>
1	January	502	119
2	February	580	140
3	March	380	162
4	April	361	165
5	May	217	164
6	June	115	155
7	July	118	144
8	August	54	152
9	September	103	141
10	October	276	101
11	November	345	94
12	December	169	118
<b>Average</b>		<b>3,219</b>	<b>1,654</b>

(BPS-Statistic of West Sumatra 2017:32-34)

## **8. Religion and Beliefs**

The Minangkabau religion is basically Islamic, but also they follow their own customary law. The Minangkabau customary law was derived from traditional beliefs before the arrival of Islam, which still exist even among some practicing Muslims. The present relationship between Islam and customary law is described in the oral tradition, founded by the Islamic law, which originally came from the Holy Qur'an.

The traditional faith has been an important component of the Minangkabau culture. Even after the penetration of Islam into the Minangkabau in the 16th century, traditional beliefs were not completely disappeared. In this belief system, people are said to have 2 souls, viz. a real soul (*jiwa*) and a soul (*semangat*) which could disappear. The latter soul represents the vitality of life and it is said to be possessed also by all animals and plants. An illness may be explained as the capture of the soul by evil spirits; shamans may be consulted to conjure invisible forces against the evil

spirits and bring comfort to the family. Sacrificial offerings could be made to placate such evil spirits and certain objects such as amulets are used for protection against them. Before the rise of the Padri movement in the late 18th century, Islamic practices, such as prayer, fasting, and attendance at mosques, were weakly observed in the Minangkabau highlands.

As early as the 17th century, Muslim traders spread the Islamic teachings to the Minangkabau highland. During that time, local rulers were the first to convert with their subjects following closely behind them, because they would like to attract Muslim traders and teachers to their lands. Minangkabau people were not strict Muslims before the 18th century, but after that they were strongly influenced by the *Wahhabi* movement from the holy city of Mecca. Since then, they have become strict Muslim, but their customary law has been incorporated into their Islam as well.

Since around the 16th century, Minangkabau people have followed the Islamic of the sect Sunni, but the practices of Islam have only been strictly adhered since about the 18th century only. The customary law is based on the maternal influence emphasized by the ethnic group of Minangkabau. Above all, this Minangkabau customary aspect is different from original Islam. Most Islamic cultures do not emphasize on women, but the Minangkabau people have combined their maternal influences with their Islam. The customary law frequently refers to the harmonious relationship between human and nature.

For the further spread of the Islam, the brotherhoods (*tarekat*) played a major role. They had their own networks, and slowly the Islamic scholars built their own networks, too. The students moved from place to place in order to study. The new religion of Islam gradually spread from one area to another. The Province of West

Sumatra was once a center of Islamic education in the island of Sumatra; it was conducted especially in each mosque being the main base for education. Under the colonial rule, Islamic schools were marginalized in comparison with the Dutch educational model, which was thought to be more modern. Joustra (1923:45) studied about the struggle or the conflict among 3 terms, viz. local customs, Islam, and modern concepts. Although all decisions should be made in a democratic manner according to the customary law, a few squabbles will occur between villagers as everything is ruled by the strict customary law with the basic principle of consensus.

According to the Minangkabau customary law, there are many traditional ceremonies: (1) baby blessing ceremony (*turun mandi*), (2) circumcision ceremony (*sunat rasul*), (3) wedding ceremony (*baralek*), (4) clan leader inauguration ceremony (*batagak penghulu*), when other clan leaders, all relatives in the same clan, and all villagers in the region are invited and the ceremony lasts for 7 days or more, (5) community work ceremony (*turun ka sawah*), (6) harvesting ceremony (*manyabik*), and (7) Islamic festivals (*hari rayo*).

According to the BPS-Statistic of West Sumatra (2017:286), the Muslim population in 2016 was at 97.88%, and others were Protestants, Catholics, Buddhists, and Hinduists (2.12%) (see Table 7).

**Table 7. Percentage of Population by Regency/Municipality and Religion of the Province of West Sumatra in 2016**

No.	Regency/ Municipality	Muslim	Protestant	Catholic	Hindu	Buddhist	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Regency							
1	Agam	99.65	0.13	0.22	0.00	0.00	100.00
2	Kep. Mentawai	24.00	49.00	27.00	0.00	0.00	100.00
3	Pesisir Selatan	99.94	0.03	0.03	0.00	0.00	100.00
4	Solok	100.00	0.00	0.00	0.00	0.00	100.00
5	Sijunjung	99.77	0.11	0.10	0.01	0.01	100.00
6	Tanah Datar	99.98	0.01	0.00	0.00	0.00	100.00
7	Padang Pariaman	99.83	0.04	0.13	0.00	0.00	100.00
8	Lima Puluh Kota	99.92	0.04	0.04	0.00	0.00	100.00
9	Pasaman	99.80	0.13	0.07	0.00	0.00	100.00
10	Solok Selatan	99.48	0.42	0.08	0.00	0.01	100.00
11	Dharmasraya	99.84	0.13	0.03	0.00	0.00	100.00
12	Pasaman Barat	98.97	0.39	0.62	0.00	0.02	100.00
Municipality							
1	Padang	96.31	1.09	2.05	0.11	0.44	100.00
2	Solok	98.02	0.97	1.00	0.01	0.00	100.00
3	Sawahlunto	99.51	0.22	0.27	0.00	0.00	100.00
4	Padang Panjang	98.59	0.64	0.77	0.00	0.00	100.00
5	Bukittinggi	97.78	1.01	0.96	0.07	0.18	100.00
6	Payakumbuh	99.11	0.43	0.39	0.02	0.05	100.00
7	Pariaman	99.79	0.07	0.14	0.00	0.00	100.00
Total		97.88	1.10	0.92	0.02	0.08	100.00

(BPS-Statistic of West Sumatra 2017:286)

## 9. Education

As for the education in the Province of West Sumatra, the formal educations are from elementary schools to high schools and the non-formal educations are Islamic school (*madrasah*) and prayer house (*surau*). The scope of non-formal educations include correspondence learning, distance learning, and open system. As for open

system, the education is carried out in accordance with the needs of pupils in order to assist them for their gradual transition from the formal education to the non-formal one.

Minangkabau people used every mosque as a school in the 19th century, then in 1970 it became metamorphosed into a Islamic school in 1970. The non-formal Islamic education has rapidly changed, particularly in its function. In former days, it had a function as a place for Islamic educational institution and for studying Sufism. These days, however, it is used as a center of culture and religious activities: a place to Islam and the Holy Qur'an recitation or a place to celebrate Islamic days as a center for Islamic information and socialization.

The education system in the Province of West Sumatra today continues to reflect aspects of its past having diverse ethnic and religious heritage. Before the modern education system was introduced by the Dutch, the mosque was the only educational institution available in the Province of West Sumatra. The Province of West Sumatra official statistics (BPS-Statistic of West Sumatra 2017:217) shows that people between the ages of 7-24 years old are attending school, which means the 77.83% of this age cohort. The remaining 22% of the same cohort either have never attended any schools or simply have stopped attending. It also shows that the school attendance of those ranging between the ages of 19-24 years old amounted to 34.71%, of which percentage is lower than other age cohorts. When aggregated by gender, the percentage of females between the ages of 7-24 years old still attending school was 79.59%, which is higher than the percentage of 76.15% of males attending school at the same age cohort.

According to the same educational statistics, those who are around 5 years old attending any kindergartens or religious schools have the highest percentage

amounting to 64.83%. This number seems to be almost the same always. If aggregated by districts and municipalities, one could see that the populations that do not attend any kindergartens or religious schools in district areas range between 4% to 8%, while they range between 3% and 5% in municipality areas.

## **10. Language**

The language used in the Province of West Sumatra is the Minangkabau language, an Austronesian language belonging to the Malay linguistic sub-group, which in turn belongs to the Malayo-Polynesian branch. The Minangkabau language is also a *lingua franca* along the west coast of the Province of North Sumatra. In addition, it is even used in some parts of Aceh, where the language is called *Aneuk Jamee*. It is also spoken in some parts of Malaysia, especially at Negeri Sembilan. Due to great grammatical similarities between the Minangkabau language and the Malay language, there are some controversies regarding the relationship between these 2 languages. Some say that the Minangkabau language is a dialect of the Malay language because it is one of the major varieties of the Malay language spoken in Negeri Sembilan. The Minangkabau language has a number of dialects and sub-dialects, but generally there is no difficulty for understanding between such dialects. The differences between dialects are mainly at the phonological level, though some lexical differences exist as well. The dialects are regional for some villages, which usually correspond to the differences of customs and traditions.

Each hamlet has its own sub-dialect consisting of subtitle differences, which could be detected by native speakers. Some dialects at the capital city of Padang have become the *lingua franca* for the people from different language regions. The Minangkabau society has a diglossia situation, whereby they use their native language

for everyday conversations while Indonesian is used for more formal occasions, such as for educations, writings, and ceremonies. The Minangkabau language was originally written using the Jawi script, which was adopted from Arabic alphabet. Under the colonial rule the Romanization of the language dated from the 19th century and the standardized official orthography of the language was published in 1976.

## **11. Subsistence Economy**

One of the most remarkable characteristics of peasant economy is its subsistence nature. As a result, peasant economy is often considered as being equivalent to subsistence economy, in which the achievement of subsistence needs is the primary goal (Oki 1984:267-291). However, the implications of subsistence economy are not altogether clear in the work of those who use the term. For moral economists, subsistence is not merely a state of economy, but involves moral implications, i.e. safety first, risk a version, reciprocity, work sharing, and the right to subsistence the communal nature of the economy. All of which constitute what Scott (1976:2) calls the subsistence ethic (Oki 1984:267-291).

This characterization of peasant economy enables us to have a deeper insight into what has been happening in peasant societies. In the same manner, Max Weber analyzed capitalism as well as the capitalist ethic (Oki 1984:267-291), because the concept of subsistence economy is so significant in this dissertation. We need to examine the concept carefully in 2 dimensions as a general rule, i.e. overall dimension and village dimension, within which moral sanctions work more conspicuously. Though these 2 dimensions overlap in many aspects, the distinction seems to be necessary. The manner of achieving subsistence is not always the same between the

regional and the village levels. Furthermore, subsistence needs and hence the rules and mechanisms of subsistence are different in these 2 dimensions in the Province of West Sumatra (Oki 1984:267-291).

The Province of West Sumatra had the surplus rice, which used to be export until the late 19th century. However, the export capacity decreased towards the end of the 19th century, due to coffee cultivation and forced unpaid labor for the government. At the end of the 19th century, this region changed from being a rice exporting to a rice importing region (Oki 1984:267-291). Peasants in the Province of West Sumatra immediately tried to increase its production, changing the region once again to a rice exporting region by 1913 (Joustra 1923:181; Oki 1984:267-291). In 1922, indeed, the Province of West Sumatra was one of the most important rice exporting regions (Geertz 1974:120-121; Oki 1984:267-291).

Each village exercises strong control over village territory, maintains a tight kinship organization, and elaborates village financial systems in order to strengthen its autonomous position. In terms of economy, a peasant village also enjoys autonomy in terms of food. However, the term ‘economic autonomy’ must be understood in a relative sense, because we can hardly imagine a village which is entirely producing all subsistence needs. The Minangkabau economy could be called a subsistence economy throughout the colonial period in the sense of the achievement of subsistence needs for the majority of the people.

In the Province of West Sumatra, ecological conditions vary from place to place: well-irrigated valleys and gentle slopes for wet-rice cultivation, drier hills for commercial crops, such as cinnamon, coffee, fruit, and rubber, mountain lakes, rivers, and sea coasts used to fishing, forests for collection of wild products, and village



compounds for vegetable gardening, making crafts, and petty commerce. The economy of each village is a particular mixture of these activities. Moreover, the distant rural communities of emigrants contribute to the economies of their respective village.

The coastal towns of the Province of West Sumatra support businesses of every sort and scale; blacksmithing, carpentry, wood carving, weaving, tailoring, jewelry, and pottery are the common industrial arts. Minangkabau people are one of the most widely known and active traders in Southeast Asia. Their heavy involvement in trade outside the Minangkabau homeland area is related to the fact that males cannot inherit anything. Men's work includes the harvesting of rice, commercial agriculture, fishing, woodworking, and trade. Women's work includes vegetable gardening, transplanting and weeding of rice fields, preparation of food, care of children and the household, and some craft works such as weaving and pottery making. Each household ordinarily gains use of traditional irrigated rice field and house compound through matrilineal inheritance. According to the customary law, newly opened land belongs to those who clear it and plant it. It might be sold or inherited as parts of male personal properties. After they become traditional lands within a few generations, however, they are managed on the basis of the matrilineal inheritance system.

## **12. Migration of Minangkabau People**

Migration is the movement of a collection of people from one region to another region to improve their own lives and economy. The migration among the ethnic group of Minangkabau is also the process of moving from one place to another place to work or live (Kato 1982:32-36; Bungo and Nordin 2011:116-131; Kahn 1976:64-95; Maher 1994:58-68). It also could be defined as the movement from one city to another city or

town. Definition of the Minangkabau migration (*merantau*) is very different from the international meaning of migration that signifies the moving to a safer place for them to continue to live after suffering a miserable life, due to the outbreak of war habit or natural disaster.

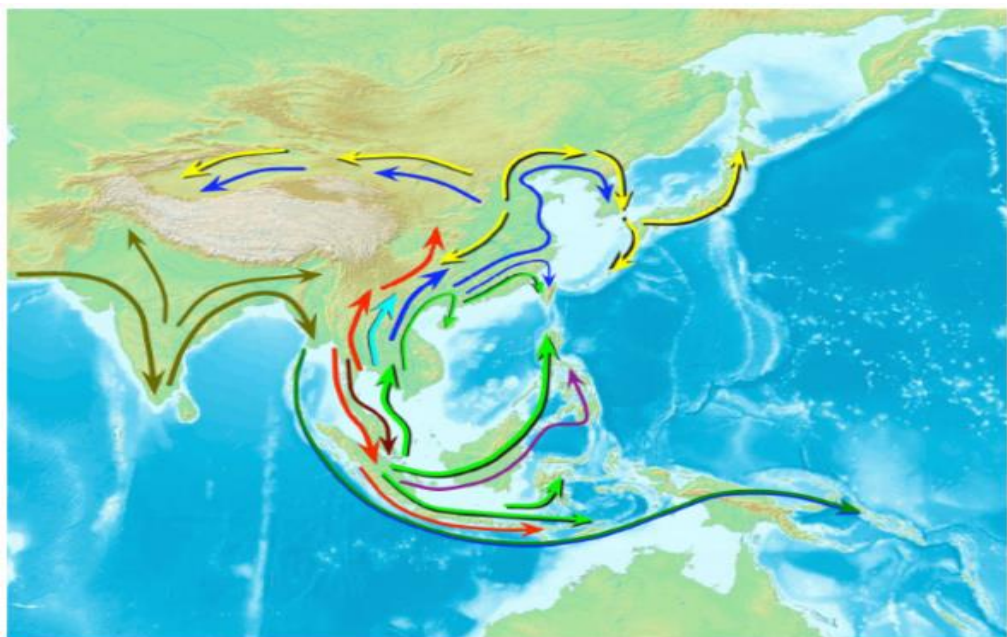
Each female child in the Province of West Sumatra will be a direct family member of the clan (*suku*) of the mother, because in Minangkabau descent lines drawn on the basis of mother's family, besides there are some other characteristic inherent to the clan of the Minangkabau, it is the habit of wondering that has been entrenched among the Minangkabau (Kato 1984:89-114). The father is not a member of the lineage of his children, and he is considered as a guest or son-in-law (*samando*) in the family who aims primarily to give offspring. The father is a kind of trustee of the line-protective of their offspring and lineage properties. Frequently, he has to restrain himself from enjoying fruits from his wife's ground, because he is not able to claim any parts of her properties. Nor is he given a place at the home of her parents, because all booths are usually reserved for female family members, but namely to accept their husbands at night. On the other hand, the father is a legitimate place in the line of his mother, in which he serves as a member of the family in the male line descendants.

The Minangkabau migration is a term for Minangkabau people who live outside of the Province of West Sumatra. The migration is a process of interaction with the outside world, and its activity is an adventurous experience to try his fortune by leaving home. All families having long traditions to go abroad usually know many relatives at almost all major cities in Indonesia and in Malaysia (see Figure 3).

The concept of migration destination for the Minangkabau is an area that becomes the natural entrance, and it also serves as a place to look for life and for trade. The migration destinations among the Minangkabau consist mainly of 2 areas, viz. eastern coastal region (*hilia*) and west coastal region (*mudiak*). For most Minangkabau people, the migration destination is an ideal way to reach their maturity and success. In these places not only wealth and scientific knowledge are obtained, but also individual prestige and honor are gained according to the Minangkabau tradition.

The concepts of migration destination are seen as something that promises hope for a better life. Based on these concepts, the migration destination is for self-development, social achieving, and better economic life. Thus, the purpose of the migration is often associated with 3 things, viz. the searching for treasures, seeking knowledge, and finding a job.

**Figure 3. Minangkabau Migration into the Whole World**



The Minangkabau exists everywhere in various parts of Indonesia, or even in the whole world. They are famous for having the culture of migration. The migration among the Minangkabau is different from one among other ethnic groups. For example, Javanese people migrate as well, but it happens through the Indonesian national project of transmigration funded by the government. Minangkabau people migrate with their own willingness and ability; they see this process as a kind of exploration, migration process, and building a better life. In harmony with the purpose of migration with seeking treasures, better lives, or rank-in orders to develop themselves, Minangkabau people succeed in having in various professions at both domestic and oversea fields. Indeed, most are traders, merchants, or entrepreneurs, but many of them also become dignitaries such as government officials, medical doctors, scientists, academic professors, state-owned or private company executives, journalists, or writers.

### **13. Kinship System of the Minangkabau**

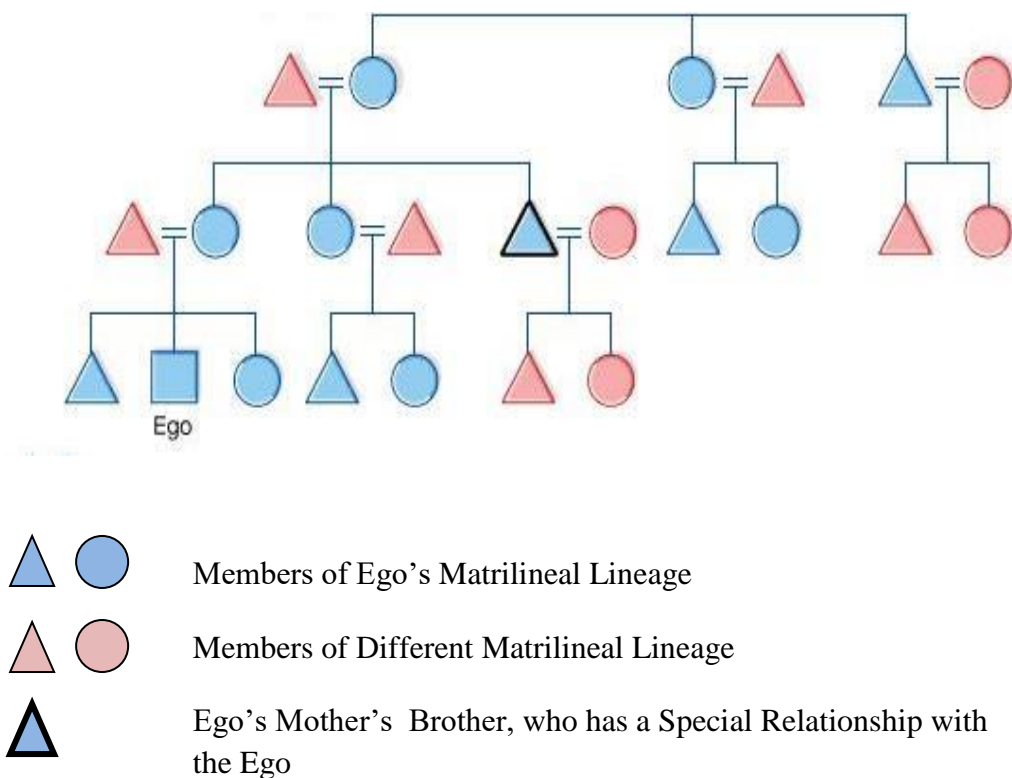
According to history, the Minangkabau culture have continued over several centuries in western Sumatra (Asri 2004:15; Is 2000:6; Jayatri 2001:32; Widya 2001:7; Soeroto 2005:34). This culture then has expanded to distant provinces both inside and outside of western Sumatra. Since the beginning of its existence, the Minangkabau has practiced their own beliefs and faiths, which are based on their own indigenous tradition (Nasroen 1957:7).

Since the arrival of Islam, however, almost all of the people have been held tightly to Islam, until today. One of the most important characteristics of the Minangkabau culture is the sense of unity among its community. They live inside their

own clans and often work together and cooperate in deciding every decision by themselves alone. This is due to the fact that the community is united under their own beliefs and customs. Although the rules of the custom are not written, the people believe that customs are mandatory rules to be followed (Asri 2004:16; Soeroto 2005:36; Hardono 2014:3).

The Minangkabau has been taught with good values and has made natural elements as an example of harmonious living (Manggis 1971:54). According to I. Hakimy (1978:78), the Minangkabau custom is divided into permanent rules that cannot be amended and flexible rules that can be amended. Permanent rules consist of the Islamic rules and regulations, whereas the flexible ones are matters relating to marriage and birth. However, both rules still implement the same matrilineal lineage kinship system (see Figure 4) .

**Figure 4. Matrilineal Lineage System**



The form of unilineal descent follows a female line. When using this pattern, individuals are relatives if they can trace descent through females to the same female ancestor. While both male and female children are members of their mother's matrilineal descent group, only daughters could pass on the family line to their offspring.

Holistically, the identity of the Minangkabau could be summarized in customs which are based on the mother's side inheritance system. Their matrilineal lineage system is one of the unique social systems, and it is practiced only among certain ethnic groups in the world. The consistency of this system is clear and well-structured. With this, the term for mothers with authority is known as matriarchate, while the term for lineages and followers of this custom is known as matrilineal (Amir 1997:89). These 2 terms clarify that mothers and female folks are given privileges and special positions by men. First of all, their lineage is drawn according to the bloodline and family history of the mother's side. Secondly, each individual is required to marry to an individual from a different clan. Thirdly, the mother has authority over the economy and peace of her household (Amir 1997:90).

## CHAPTER II

### THE VILLAGE AND FISHERMEN'S HOUSEHOLD

#### 1. Introduction

The concept of village (*nagari*) connotes a traditional organization, which is considered as the smallest unit of local government in the Province of West Sumatra. A village is legally formed on the basis of territorial or genealogical factors; its borders are clearly defined and it originally consists of 4 clans (Kurnia 2010:55). These day, the number of villages estimates up to 754, spreading throughout 12 regencies. Each village consists of several hamlets and it is governed by the head of village (*wali nagari*), who is both a political and cultural leader, and by a village council (*dewan nagari*) as the village legislative body. The Regional People's Representative Council (*Dewan Perwakilan Rakyat Daerah*) is the only law making body in the Province of West Sumatra. Each hamlet is led by the village representative. The legislative body of each village consists of representatives of kinship group leaders living in the same village (Afrizal 2007:35).

The village was and is the most important form of political organization among the Minangkabau. In olden times, the village was governed by the council of heads of matriclans (*penghulu*). The Dutch created the head of village as the highest governmental official and representative in relations with the Netherlands. For the purpose of doing the forced coffee cultivation system, the Netherlands created a limited number of administrative clan heads (*penghulu rodi*), who were responsible for the cultivation and delivery of coffee by members of their matriclans.

The Dutch administration also attempted to freeze the number of heads of matriclans by prohibiting the installation of new heads of matriclans, which made the

earlier customary law mechanisms through lineages officially split. In 1970, the Indonesian government started to homogenize the plurality of laws on its territory, to consolidate centralist rule, and to standardize the regional variations of local government. The Javanese model of the village as the lowest local government unit became standard by the Indonesia law on local government of 1979. In the Province of West Sumatra, it was effectively implemented in 1983. According to tradition, each Minangkabau village was, above all, based on its hamlets and the customary laws of its hamlets. Among the Minangkabau, this resulted in the fact that the villages were split up into 543 villages, and, if including the Mentawai islands, into 3,516 village. The reason for the relatively easy adoption of this new structure was that the government allocated a development grant to each village, on the basis of the new law, irrespective of its size or population.

As the village was substantially larger than ones elsewhere in Indonesia, the Province of West Sumatra would financially be disadvantaged severely if it would merely have converted one village into one rural zone (*perdesaan*). Division of one village into several rural zones meant that the number of funds was multiplied nearly by 7. It became apparent that many rural zones were too small and had too few inhabitants to be available for the administrative units. In 1988-1989, therefore, the number of rural zones was reduced by joining adjacent rural zones to form a new one. Afterward, there remained approximately 1,700 rural zones. Then, the financial system was changed, and the size of each rural zone was no longer vitally important.

The village has traditional houses, or namely big houses. Traditional houses have archaic constructions that have been inherited for generations. The shape and style of the traditional house contains its own unique values inside a community



culture (Hanafi 1985:30). The construction of the traditional house's architectural components has been heavily influenced by cultural elements. These elements have a strong base concept of custom, belief, religion, and ritual beliefs. This sort of construction is different from that of common houses, because their constructions are through the values mentioned inside the traditional house (Mat 2010:10).

The different aspects of construction among traditional and vernacular houses could be seen by the years of construction and by the values that were implemented during the construction process (Is 2000:23). From the cultural value aspects, it is related to the philosophies, the viewpoints from the men having different backgrounds, and the customs of those who have been influenced by the environment especially. In the case of Minangkabau house, the basic principles for identifying a traditional Minangkabau house include 2 construction aspects, i.e. primitive construction and vernacular construction.

Usually, the Minangkabau house, which was constructed through traditional ways, is influenced by the customary values and culture which have been inherited for generations; it is significantly different from a vernacularly constructed house (Vellinga 2004:92). According to S. Asri (2004:4), the Minangkabau house, which is also known as the custom house, is made as a template from the similar related traditional houses. This customary and cultural aspects appear not only at the physical manifestation of the house, but also during the early processes of the house's construction before it is inhabited. It has been heavily influenced from the customs practiced by the Minangkabau community, of which system is based on the mother's side or matrilineal inheritance custom. The architectural features are adorned with

ritual concepts and beliefs, which are also based on the strong matrilineal culture and custom.

The most significant basic concept is the structure of the internal arrangement that remains unchanged. Every feature and unit of the Minangkabau house gives its own function and meaning, being a product of influence from social, economic, and political relations inside a matrilineal system practiced by the people according to tradition. According to Asri (2004:4), the architectural features are shaped on the basis of the principles of ancient construction, which produce the Minangkabau house in a uniform design. The Minangkabau house is built with permanent methods and principles, which have been brought down since several generations ago.

## **2. History of the Village**

The existence of traditional form of the village dates far back to the 14th century after the establishment of Kingdom of Pagaruyung, a Melayu Kingdom in the contemporary Province of West Sumatra. When the Netherlands occupied this kingdom, it enacted a law called *Regeringsreglement* (R.R.) on 1st January 1848, in which the Article 62 gave certain rights to customary law institutions to deal with family and land issues. In this area, it was the first regulation which dealt with the village. This law, patterned on the 1848 Dutch Constitution, was deemed to be the imposition of the Dutch law upon colonized Indonesia as a constitution. From the Kingdom of Pagaruyung to now, however, the village has undergone several social and legal developments. After the independence, in fact, a new regulation called the Announcement (*Makloemat*) was passed in 1946 by the local government, that split the

leadership of the village into 3 bodies, viz. the village council, the regional people's representative council, and the head of village.

Furthermore, the village government was again restructured in 1963 by another provincial regulation that set up 3 new bodies, viz. the head of village, the village council, the regional people's representative council whose membership was open to all village community members. In 1974, however, the Indonesian government enacted the Act No. 5/1974. This law as well as the Act No. 5/1979 played significant roles in shaping local governments throughout Indonesia. The government of the Province of West Sumatra changed the Act No. 5/1974: the the village council became a single body, i.e. village customary law boards (*kerapatan adat nagari*) as the only village instrument having both judicial and legislative powers (Taufik 2000:2-6). The members of village customary law boards consisted of kinship group leaders, Islam experts (*ulama*), and the village intellectuals (*cadiak pandai*) (Taufik 2000:6-7).

The village system had long been under people's way of self-governance until it was dismissed by the Act No. 5/1979. It was replaced with a new system of governance named rural zone under the Suharto's administration. In the Province of West Sumatra, this law came into effect in 1983 and this resulted in the retirement of the village leaders as the concept itself was dismissed. In order to preserve the Minangkabau tradition, nevertheless, the local government enacted the Provincial Regulation No. 13/1983, which put in place a new style of village with the village customary law boards, whose leaders were elected by its members and were approved by the head of the district (*bupati*) (Afrizal 2007:36-37).

Although this new provincial law has reintroduced the local government into the political arena and helped village to recover its legitimacy in the Province of West

Sumatra, the village is yet to be free from the influence of the district government as its elected leaders need to be approved by the head of the district, and they could be removed from office by the local government. The reason for returning the village system to the local government governance was that many local politicians and traditional village leaders claimed that the village bureaucratic system had not functioned well. However, it destroyed the customary law and the unity of the village population, and eroded the authority of the elders over the young (Benda-Beckmann 2001:18-22).

In 1999, the structure of the local government in Indonesia was changed again, when the government enacted the Decentralization Act No. 22/1999, and then the Decentralization Act No. 32/2004. This time, the Indonesian government allowed room in the state legislation for more local autonomy of political and economic affairs. The article 93 of the Decentralization Act No. 22/1999 stipulates that village must be created, abolished, or integrated in consideration with the origin, on the initiative of the people and with the consent of both the local government and people's representative assembly. In 2000, the local government responded to this law by enacting the Provincial Regulation No. 9/2000 on the village government, which came into effect in January 2001 and, from then on, the village has remained the lowest unit at the state hierarchy in the Province of West Sumatra.

In the 18th century, the village of South Tiku was one of the major ports in the Minangkabau region. The historical evidence shows that there are a style of Portuguese bride clothing, Portuguese high socks, and Portuguese vests, which tells us that the Portuguese used to use the Tiku coast as a navigational shelter. Indeed, the word *tiku* itself comes from the Portuguese word of shelter (*tako* or *teko*). This means

that Tiku was constructed as a logistical sea port by European colonial invaders (<http://nanangsarfinal.blogspot.com/2008/09/sisa-sejarah-tiku.html>).

The village of South Tiku has a long history, both in terms of local government and of its customs. Starting from the Minangkabau kingdom in the mid-17th century, when the Minangkabau shouldered arms to rebel against the Dutch colonialism. The Dutch government commission in Sumatra, which was located in the town of Bukittinggi, issued a regulation on the establishment of regional autonomous counties in Central Sumatra, which consisted of 5 regencies with its capital Bukittinggi, covering districts of Agam Tuo, Padang Panjang, Payakumbuh, Lubuk Sikaping, and Talu, excluding for the villages of South Tiku, Sasak, and Katiagan.

The Dutch government changed Agam Tuo Regency to Agam Region (*Onderafdeling Agam*), consisting of Tuo District, Maninjau District, and Talu District. At the beginning of 1945, the Bukittinggi Regional Independence government divided Agam Region into 3 kingdoms, viz. Agam old kingdom, Maninjau kingdom, and Talu kingdom. By the Decree of the Military Governor of Central Sumatra No. 171/1949, Agam Region was minimized as Talu kingdom incorporated Pasaman area. The Military Governor of Central Sumatra's decision was confirmed by the Act No. 12/1956 on the establishment of the regencies in the Province of Central Sumatra, so that this region finally became Regional Level II Agam Regency. On 19th July 1993, de facto, Agam Regency put the capital in the town of Lubuk Alung, boosted by the release of the Government Regulation No. 8/1998 (<http://agam-media.blogspot.com/2011/09/sejarah-and-sosiologi.html>).

According the local history, the family head of matrilineal clans in the village of South Tiku originally came from the settlement of Jambak Galo Gandang in Tanah

Datar Regency. In the family, a man named Puti Seang Hati migrated to the west coast with bringing his 4 children, 3 women, and a man. The first child is named Puti Ambat, the second named Puti Langgam, the third named Sutan Mara Basa, and the youngest named Puti Manih. According to the record, which is still kept by the family head of matrilineal clans in Tanah Datar Regency, however, Puti Sanang Hati had actually 4 children, but the children's names are not written because they were torn up. It simply states that Puti Sanang Hati had 4 children only, one of whom was a male.

In the village of South Tiku, all names of the families of matrilineal clans are recorded. The blood relationship has not been broken. In former days, the family head of matrilineal clans held the customary law ceremonies at this coastal village. The family head of matrilineal clans named Shultan Mara was the last and only male having the title of customary law ceremonies. One of his characteristics was a tall broad-shouldered concave, which was a sign of the true family head of matrilineal clans coming from the original family, and he was famous among the people as the family head of matrilineal clans (*Datuk Rangkayo Basa nan Cakuang Dado*). There is a tombstone in the cemetery at the village of South Tiku, of which stone came from the settlement of Jambak Galo Gandang in Tanah Datar Regency; on it, the inscriptions of Jambak and Jawi-Jawi Tiku are observed. According to an oral story by old men, Shultan Mara was the progenitor, and he had various privileges, which made him a respected man by inside and outside people.

The succession system is known as *sako* and *pusako*. The family head of matrilineal clans usually has the full duty for the title succession as the right holder of succession. The succession is forwarded by nieces, nephews, or grandchildren. In the village of South Tiku, one nephew of Shultan Mara finally held the title of the family

head of matrilineans; his name was Sutan Tamin. After Sutan Tamin died around in 1970, this title was not used ceremonially anymore, because one of his nephews who was supposed to resume the title of the family head of matrilinean, migrated out of the village of South Tiku.

In order to keep the succession system and the identification of the village of South Tiku, however, the descendants of the family head of matrilineans have not been disappeared. For example, Sutan Badar Alam, one of descendants from Puti Senang Hati, restored the funeral ceremony for the settlement of Jambak Galo Gadang at Simpang Tiku Jawi-Jawi, and he built a big traditional house not far from the place of the funeral ceremony, rehabilitated the buildings, and gave some land to the Nurul Wahab Mosque.

### **3. The Layout of the Village**

The village of South Tiku has grown with the population of matrilineans. Each clan (*suku*) is divided into some lineages. The lineage is not a territorial but genealogical unit. Sometimes, however, the name of lineage is used for the personal name of local hamlet. In the Malay language, indeed, a village is called *kampung* (Westenenk 1918:11). Many members of lineages still retain the memory of the name of their clan mother, but some have lost all memories of their real ancestress. At the beginning of the present century, the Minangkabau had 96 lineages.

P. E. de Josselin de Jong (1952) primarily directs his attention to the theoretical problems, concerning with the Minangkabau social structure. One of the stages in the development of small families was formed by the transfer of guardianship of the son from mother to father. The idea that the father was responsible for the education of his

son gradually gained the upper hand and it became the custom that not father but relatives on the mother's side pay the school fees of the son. The break-up of the sub-lineages (*paruik*) into small families (*jurai*) or the formation of small families means that the traditional bonds between lineages and clans become disrupted, which is ceased to be regular and at last disappeared altogether.

In former days, these bonds found their expression in the existence of 4 exogamous clans tied together by the favored marriage to the mother's brother's daughter and by the rather wide-spread custom of the sororate and also in the existence of 3 different legal groups, i.e. the mother-right group (the group to which ego, ego's mother and all ego's relations on the mother's side), the group of ego's father called *induak bako*, and the husband group (*urang sumando*), to which the wives of the men of a given matrilineal extended family belong. Now the obligatory marriages come to be replaced by marriages between representatives of the most divergent clans and their sub-divisions. The number of marriages concludes on the increasing strength of mutual attraction. The social organization among the Minangkabau is losing its distinguishing traits of unilateral or circulatory connubium. The genealogical factors in marriage are gradually losing their significance. All these naturally undermine the authority of the family heads and the heads of clan, and they accordingly put up a stubborn resistance to the new tendencies.

Conditions of the settlements in the village of South Tiku is less well maintained; it could be seen from the condition of the houses and their surrounding environment. Piles of garbage exist in some areas around the houses. Besides sanitation, the waste management system and the condition of household sewages are



inadequate. Therefore, it could be concluded that the environment and health conditions are poorly maintained at the village of South Tiku.

The settlement pattern is a manifestation of the form of settlement in an area that includes the patterned layout of shelter houses. The layout pattern of the traditional Minangkabau village of South Tiku is not much different from the usual village layout pattern along the coastal region, where houses stretch along the beach on the Tiku coast.

The settlement pattern at the village of South Tiku, which follows the coastline starting from Gasan Kaciak hamlet, proceeds toward Banda Gadang hamlet, Pasa Tiku hamlet, Kampung hamlet, and Pasia Paneh hamlet. To go to the village of South Tiku, we could be reached it by 2-4 wheeled vehicles with a fairly good road; it takes us 4 hours to drive from the capital city of Padang to the village.

Most houses located around the coastline are owned by fishermen households and small-scaled fish traders. In general, houses in the village of South Tiku, especially along the coast, consist of traditional and modern houses, but only a few buildings are traditional, which are about 5-10 houses. Houses located around the main road, which runs around the village of South Tiku in the shape of an ellipse, and houses near the beach are usually places for fish traders.

On the basis of my own observation, there are 5-10 houses in the settlements around the area of the beach inhabited by fishermen who do not deserve a place to live. Around these settlements, there are 2-4 food stalls, which are always filled by fishery workers, especially when they finish carrying out their own activities, such as trawl fishing, and when the weather is not good at the time of the storm. The usual activities

they do there are talking about fishing activities, play dominoes or cards, and just drinking cups of coffee.

#### **4. The Village Population**

The matrilineal system is an important component of the customary law among the people in the village of South Tiku. D. Rahayu (2007:21) states that the matrilineal system is composed of 4 identifiable characteristics. The first one is descent and descent group, which are organized according to the matrilineal line. Each village consists of several ideally exogamous matriclans. Some clans take their own personal names from area names, such as Melayu, Piliang, and Chaniago. Sometimes, however, one could take the clan name from one's mother. Each clan itself is usually divided into several matrilineages.

There are 3 levels and units of matrilineal groupings, i.e. clan, lineage (*payung*), and sub-lineage (*paruik*). A clan is a group of related lineages, which share a common, but occasionally unknown, ancestress. A lineage is a group of related traditional houses under supervision of a headman. A sub-lineage is a group of related people generally living in one traditional house. The second identifiable characteristics is matrilineage, which is identified by a corporate descent group with a ceremonially instituted headman. The headman is distinguished by a special title, such as *Datuk Sanggono Diradjo*, which belongs to his lineage. The headman has authority over his lineage members. A lineage possesses communally owned properties, including agricultural land, houses, fish ponds, heirlooms, and miscellaneous customary law titles.

In principle, every ancestral property, in particular one of immovable kind, is inalienable, which is not individually owned. Lineage is further divided into several sub-lineages. These also have their properly, recognized male heads (*tungganai rumah*). Ancestral properties or, rights to their use (*ganggam bauntuak*), are assigned to them for the benefit of their respective members. The third identifiable characteristic is a duo-local residential pattern. Marriage is always clan exogamous, and it retains the matrilineal form. After marriage, a husband moves to the house of his wife or near it and stays there only at night. On the contrary, he continues to belong to his mother's house. The husband cultivates the field or land for his wife who owns it. The wife owns her children, too; the property of the father passes to his sister's children, not to those of his wife or his own children.

In the village of South Tiku, authority within a lineage or sub-lineage is in the hand of mother's brother (*mamak*), not of the father. The mother's brother literally means maternal uncle, but the term could also be used for classificatory maternal uncles. The kin term which complements the headman is sister's children (*kamanakan*), which signifies a male ego's sister's children or a classificatory kin of the same order. These authoritative characteristic, the fourth identifiable one, in the village of South Tiku would become obvious if we see how family life is actually organized at this traditional society.

## **5. The Composition of the Village Household**

Because father is not a member of the lineage of his children in the Minangkabau matrilineal descent system, Minangkabau men have always the strong motivation to migrate. However, not only because of this factor but also owing to

some other factors, Minangkabau men would like to move from agriculture sector at villages to commercial sector at towns nowadays. One of the most important factors is the fact that the agricultural sector gives them only small revenues at rural zones.

At the village level, each Minangkabau man usually makes a living by going to the market as trader, or by working as carpenter, plowman in the field, tailor, shop owner, office worker, and so on. He could work in the fields of line-offspring or descendants of his wife's lineage only in as a part-time worker, but only when nothing else to do. If he decides to cultivate the land of the lineage of his mother to have some results, he usually does so as a profit-sharing employee (*penyedua*), where he receives only a part of the results, while the other parts devote to the outline of the actual female offspring, who is the owner of the land.

In Minangkabau traditional rural families or communities, women still do most work in the rice fields, looking after poultry and rearing animals to be sold. Their husbands assist their wives and other female family members in certain phases of the agricultural activity, but they are always willing to be involved in activities that require traveling. In this context, the Minangkabau society is largely constituted of small traders, food businesses, tailors, and so on (Peletz 1999:242-277). Transitions of men's roles as brothers, husbands, and fathers are severely observed among the Minangkabau. A long time ago, a husband was not responsible for providing his wife and children's needs, or making decisions in his wife's household (Mitchell 1969:123-137). It is the responsibility of the wife or member of her clan, such as his wife's brother or his wife's uncle. A husband is responsible for his sisters and their children belonging to his own clan. It is noted that a husband is not necessarily faithful and he could leave

his wife at any times with the simplest reason. One is able to draw expression with reference to men in their roles as husbands (Mitchell 1969:123-137).

In this case, the value developed in the Minangkabau seems to be self-fulfillment. It looks that these expectations and demands reflect the increasing self-regards among women who assess and rank one another's pursuant to what their husbands bring home. Due to this, there are frictions between his wife's lineage and his mother's lineage. The psychological burden which becomes a serious issue urges Minangkabau men to travel or to become entrepreneurs, which results in upraised prestige (Peletz 1999:242-277). In fact, most Minangkabau men are still expected to support their mother lineage families, especially female relatives and their children apart from economic responsibilities toward their own wives and children.

The Minangkabau migration tradition was initially influenced by their quest to conduct commercial relations with other states. The Minangkabau are known as capable merchants. Strong commitment to traditional values drive the Minangkabau society to inculcate its cultural influence in foreign countries. Even during migrations, they hold to the Minangkabau philosophy: wherever we stand on earth, we honor the skies (*dimana bumi dipijak, disana langit dijunjung*), which represents a guiding value of the Minangkabau, while they are in places far from their homeland. This philosophy rises the image that Minangkabau society is being well respected and it has warm relationships with other people always.

In addition, the personal abilities of Minangkabau people are shown by the fact that many of them have become leaders even in foreign communities. Moreover, their orientation of going abroad has changed these days from trading to working in large companies and in famous hotels. In fact, their orientation could be divided into several

phases. Before Europeans arrived in the Indonesian archipelago, first of all, the Minangkabau had an active commercial connection with the Acehnese and other foreign merchants in the archipelago. The competition between Chinese merchants and Minangkabau merchants happened a long time ago, but Chinese merchants have solid network, so that Minangkabau merchants usually tend to fail in the competition. Besides their inability to compete with Chinese merchants, the Minangkabau has no entrepreneurship criteria at all.

## **6. Systems of Social Control**

The customary law as a systems of social control in the village of South Tikus is an order of life that has occurred continuously to regulate the ethical life, politeness, and civilized accordance with the guidance of Islam. The Minangkabau philosophical teachings of customary laws, which are based on religious laws and religious laws, according to the Holy Qur'an (*Adat Basandi Syara, Syara Basandi Kitabullah*), uphold a meaningful religious implementation values in village customs.

The customary law has an important role in social life. Its crucial role is maintaining the noble values of indigenous and indigenous cultures in the implementation of the governmental role with the community leadership (*tungku tigo nan sajarangan*). The indigenous role is having all social elements in society, such as customary law leader (*niniak mamak*), intellectual (*cadiak pandai*), religious leader (*ulama*), and customary law female (*bundo kanduang*), in order to accelerate the development process at villages.

The government of the Province of West Sumatra has one policy, i.e. going back to villages (*babaliak ka nagari*) with autonomy. This policy is the sense of

returning to the longstanding, but fading, tradition. As globalization advances these days, however, the whole application has not been able to translate in a concrete way in the midst of people's lives, so that there are concerns for more fastness and low understanding of religion for younger generations.

## **7. The Village Economy**

The Minangkabau's educational level has been improved (Koentjaraningrat 1975:144). Mochtar Naim, as cited in A. R. Rizal (2000:49-55), identifies some factors that urge the Minangkabau to leave their region and agriculture. These factors come from ecological pressure, geographic pressure, demographic pressure, economic pressure, motivation of education, and attractive cities. The economic pressure has become the primary reason why the Minangkabau leave their region. The Minangkabau sense of belonging values is known as good traders, but they have also a fanatical attitude toward their home villages (Rizal 2000:49-55). The financial products and services of local banks (*bank nagari*) have supported businesses outside of the Province of West Sumatra. The regional linkage and secure feeling of financial products by local bank are a kind of assurances for Minangkabau traders.

Thus, Minangkabau people have become more competitive. They have the orientation to progress and to place themselves differently on a higher level in small business entrepreneurship (Swift 1985:346-355). Minangkabau traders begin with informal trading, while Chinese traders begin with formal trading. There is a lower solidarity among Minangkabau merchants in comparison with Chinese traders (Djambek 1995:2). Moreover, Minangkabau traders are using micro banking products, which means that their efforts are emphasized on small industries. Conversely,

Chinese traders have been forming its capital since the colonial era. They have had many experiences in business and have been tied to Chinese business. Their businesses have been developed and elaborated considerably faster. Therefore, Chinese traders require corporate banking products from their own banking institutions.

In the Minangkabau village, the most important economy is the subsistence economy of agriculture. The subsistence economy has formed a functional relationship with its rural market system. The impact of rural market on the social structure of the Minangkabau people has social response into the global economy (Effendi 1999:63-80). In an anthropological investigation of the nature of an underdeveloped peasant economy, Kahn (1993:1-29) attempts to develop the insights generated by Marxist theorists, through a concrete case study of a peasant village in the Province of West Sumatra. He accounts for the specific features of this regional economy, and, at the same time, examines the implications of the long European domination of Indonesia. According to him, the most striking feature of the Minangkabau economy is the predominance of rice commodity relations in agriculture, handicraft, and the local network of distribution.

Kahn (1993:1-29) illustrates this with material on local economic organization, which he collected at the highland village of Sungai Puar, which was famous for its blacksmith industry, and with published and unpublished data from other parts of Indonesia. The study is a combination of a theoretical analysis of underdevelopment and a detailed regional study. It appealed to those who were interested in Southeast Asian study generally, in development research, and in neo-Marxist approaches in anthropology.



Graves (1981) in her dissertation saw the socio-economic system of the Minangkabau village, with its tradition of migration by which young men left home to seek their fortunes. The migration was uniquely suited to take advantage of the new opportunities offered by access to the Dutch colonial empire. G. Willinck (1909), who had opportunity to study the first-hand Minangkabau economy and the way of life in Minangkabau in the 20th century, was a Dutch governmental official. According to him, the most drastic economical changes were seen in developed outer districts, where a considerable part of the population had newly arrived from central districts. Considerable change also occurred also in central districts, where trade and monetary relations had most rapidly developed. Toward the present time, the prohibitory rules in connection with clans and village exogamy had entirely or almost entirely disappeared in central districts. The only remaining exogamous units are the sub-lineages, but even this situation is by far not in all cases. In towns and villages in coastal regions, such as the cities of Painan, Padang, and Pariaman, the prohibitions only apply to the nearest relatives, although people still retain in memory as to which clans they belong.

The majority of the fishermen in the village of South Tiku has low income. With limited economic conditions, each house is also very simple and it is not in accordance with the terms of health standard. Housing conditions are less well maintained, and high-density residential areas attached to each other are vulnerable in case of fire. In addition, each house does not meet the physiological and psychological needs, susceptible to noise, lack of lighting, bad air circulation, the lack of space for children's play, and the lack of adequate privacy. The residents in the village of South Tiku are not able to provide protection against the transmission of disease and accidental fire hazard. Therefore, it could be concluded that the circumstances are not

yet habitable. The problem of inadequate housing is serious at the village of South Tiku.

The fishermen usually finish primary school education, but some do not finish it, so that their basic knowledge and skills are extremely limited. When fishermen do not work in case of bad weather, therefore, generally they are unemployed because they do not have sufficient skills to work on other activities. These conditions impact on low economic level, in particular, among fishermen's families. This is one reason why wives of fishermen have to work for the economic burden of their families. Earned income could help the sufficient needs of daily life only, when fishermen do not go to the sea for a long time. The problem of the limited skills of indigenous people is also serious at the village of South Tiku.

According to Koentjaraningrat (1975:5-6), community organizations, charities, or social institutions is a system having specific norms that organize a series of patterned steady action to meet a specific need of the human being in society. The conclusion from the above definition is that, the system of norms regulate system the actions and measures to meet the pattern of human life in society. Rahardjo (1999:45) states that social institutions briefly could be interpreted as a complex of norms or customs to defend the values which are considered extremely important in the community as a container and concrete embodiment of the culture and structure. On the basis of some earlier understandings, it is understood that the social institutions in the community of fishermen are as follows: the norm or customs are structured, patterned, and practiced continuously to meet the needs of the community members closely related to the livelihood of fishery in coastal areas.

Institutional fishery in coastal communities is still understated, closely linked to traditional economic activities. In rural communities where their economic activities are still dominated the monetary economic system, causing the strength of the latch-hooks to the economic and social activities, the system of mutual assistance in the fishery production, the sharing system, the system of debt, and the traditional system which is more relevant to the operation of fishery production.

Social and economic institutions intend to meet the needs of society into their life. The public need is not linear, although it tends to be a necessity born of the needs of individuals as members. The tradition of mutual assistance has clearly been socially institutionalized and entrenched; it is manifested in a variety of activities of fishing in the village of South Tiku. In general, mutual aid activities have a central theme as mutual help among members of the community, in which each of the parties involved mutually contributes, is important. When somebody receives the reward, he should do the activity at which the inherent cooperated spirit of back reciprocity leads strongly as a pointer of the ongoing process of cooperation with the fair. Activities of mutual cooperation in various dimensions have implications for the spirit and for values of mutual guarantee or self-guaranty for rights and survivals among fellow citizens who are still attached to the countryside tightly.

## **8. Household Structure**

The household structure in the village of South Tiku could be described in terms of people of the same womb (*saparuik*), viz. mothers, their offspring, and their brothers. Descendants of an ancestress live together in one house. In the highlands, up to 30 members live under a single roof. Each clan has a headman, who is chosen among certain families. The headman settles disagreements or quarrels in his own clan

before they go to the civil courts. If the headman dies, the title usually passes to his first nephew or one of his brothers.

The woman's family generally initiates the marriage proposal. If a man has his eye on someone, however, his family may propose. The only restriction is that the spouse must come from a different clan. In rural and coastal areas, even dowries are necessary. The bride does not leave home, while the bridegroom moves into her house. After the wedding, the bridegroom is escorted to his bride's house, proudly taking with him all his possessions, proving the man of substance. After marriage, the husband spends most of his time at his sister's house, working and eating there, returning to his wife's house only at night. A man loitering around his parent-in-law's place is considered to be lazy.

A pair of systems, which the Minangkabau customary law has, are said to have come from the result of conflict between 2 half-brothers, viz. Datuk Ketemanggungan and Datuk Perpatih nan Sabatang, both of whom were the leaders formulating the foundations of the Minangkabau customary law. The former married Adityawarman, a prince from Majapahit, becoming the king, while the latter became a minister. The Bodi Caniago custom was formulated by Datuk Perpatih nan Sabatang, which was based upon egalitarian principles with all headman being equal. On the other hand, the Koto Piliang custom was formulated by Datuk Ketemanggungan, which was more autocratic with a hierarchy of headman. Each Minangkabau village used to be an autonomous 'republic', and it was governed independently by some Minangkabau local lords using one of the 2 customary systems. After new outside settlements were created, however, some villages were ruled by local lords, as representatives of the king, who used the Koto Piliang custom (Willinck 1909:88-93).

In former days, the study focus was often on the propensity of Minangkabau villagers to migrate. The migration is the activity to travel out of their villages to search for a better life, education, and experience. It is not only done because of urbanization process in modern culture, but it already becoming an ethnic tradition. The matrilineal system refers to the family relationship which could be traced through a female and maternal ancestor. A Minangkabau person belongs to their mother's family clan. Clan is a female unit which inherits landholding and clan's treasure. These family groups are typically led by a headman who is elected by groups of lineage leaders. The matrilineal system is the opposite of patrilineal system, which is more common in Islamic country. Therefore, it is a unique tradition among the ethnic group of Minangkabau (Kato 1984:89-114).

The Minangkabau as one of the main ethnic group in Indonesia is effected by the globalization itself. This ethnic group is known for its dynamic ethnic culture. Minangkabau people are accustomed to travel around the world, seeking for a better living, education, and experience. This tradition called migration and it is a common activity for young Minangkabau people. Through the migration activities, Minangkabau people take their culture and tradition to new lands. Its tradition is absolutely the base of the Minangkabau culture. Migrated people are always looking for the Minangkabau societies, as they need to be rooted to their culture, which constructs their own identity as well. Therefore, the Minangkabau travelers are still connected to their home villages and clans, and they always find the way to go back home. This identity is related to the cultural characteristic of the ethnic group of Minangkabau (Kato 1982:35-37).

The traditional Minangkabau house is called *rumah gadang*. The modernization and globalization have changed the traditional house into the house as symbolic position of their cultural tradition. The traditional house now is mainly a symbolic house for Minangkabau people. Many various forms of such house could be seen throughout Minangkabau villages (see Figure 5). The visual form of the traditional house as the representation of the ethnic identity of the Minangkabau appears in different form of visual language (Willinck 1909:130-135; Joustra 1923:67-69; Westenenk 1918:80-97).

**Photo 1. The Traditional House in the Province of West Sumatra**



The matriarchy is a form of social organization, in which descent and relationships are reckoned through the female line. This has sparked interest to many anthropologists, because, throughout history, most culture groups have been dominated by males. Although women have become equal in most countries, they are still put beneath men in several parts of the world. To see a female dominated society is

something unique and interesting, to say the least. Among the Minangkabau, furthermore, mothers are extremely important. All items and properties are inherited along the mother's lineage. Children grow up at clans, where women sit in front of men. Their name and identity are used, when the clan and the families revolve this idea. The fathers and sons do not attempt to challenge this way of life, as this culture has the long tradition. Communities seem to be run smoothly in this style. Trying to break such cultural norms are thought to be disobedient and disrespectful. Because women own all the rights to property and children, men act as guards rather than fathers, who protect the women and their possessions. Young boys learn to live separately from their own family. The matriarchal ideas come partly from the Islamic traditions, which says that males are expected to seek education and experience away from home. Boys learn this cultural norm when they are young. They always leave their own houses to sleep at local prayer houses or mosques with other boys from the same community. The sisters and mothers remain in their households, maintaining control of the property and sharing each other's company.

The structure of these households is correlated with the culture. Minangkabau houses are used not only for residence, but also for family meetings and ceremonial activities. For example, many of Minangkabau people use their homes for wedding parties and head inauguration ceremonies. Each has a large common living space with several bedrooms against the back wall. In front of the bedrooms lies a small kitchen area. In addition, some houses have raised platforms which might be used for certain ceremonial events. From the outside, the traditional house appears horizontally long. Its roof has 2 pointy ends on the left and right, resembling the horns of a buffalo.

These houses are made of special types of wood, which are absolutely flexible but extremely strong.

Men only return to these houses when they are ready to contribute financially. It is their responsibility to come up with money for resources and food. They spend most of their time outside the house, working or going to school. Other reasons to return to the house is to comfort their wives and ensure that they have everything necessary to live at the given time. Adult sons and grandsons, who have not yet married, sleep daily in local prayer houses or the houses of their mothers' sisters. Husbands sleep with their wives in their bedrooms, but they are seen and recognized as guests by the rest of the wives' families. The wives and daughters have complete control in the household, being unique and unusual way of living.

Marriage is seen as to be advantageous for females for several reasons. People believe that marriage bestows women with political, economic, and social privileges. This is somewhat true, but men also could gain social status when they marry. This is because men now could contribute to female households while women are held with the utmost respect. Men always look for spouses who have large houses, a lot of properties, and a good amount of resources. Women look for men who have 'clean blood' and strong seeds. Women usually marry between the ages of 15 and 25 years old, while men do not have any specific ages when they are engaged. The engagement process is more complicated than many would assume to believe. Because of the importance of social status, the parents of the bride visit the village of the potential groom to observe his level of respect in his community and his own descent group.

The wedding ceremony begins with the bride's side of the family going to the house of the bridegroom. At his house, a large feast is held in the common area, but it



is sometimes held outside. The family of the female then give some presents to the bridegroom and his family with a marital basket full of gifts, which represents the social prestige of the female. The bridegroom is now a new member of the wife's family. After the feast and toasts, the women on the side of the bride's family tie the hands of the bride and bridegroom together, and they then lead the bride and bridegroom to the bride's house. On the way to her house, the bridegroom has to do the quasi-fighting against the males of the bride's family. This is a kind of playful event. When it is over, the bridegroom spends the night at the bride's home. When the entire process is completed, the bride and bridegroom officially marry, having a new level of respect in their society.

## **9. Social Relations within the Family**

The Minangkabau is able to construct and to embody the truth in their lives through a style of interpretation which seeks and finds meaning displayed on the visible surfaces of social action. They have developed a distinctive style of interpretation which allows them to resolve these problems of meaning, or a style which they apply both in their evaluation of conduct in their understanding of their own customs. The Minangkabau consciousness could find the meaning to be conveyed through signs rather than through symbols (Errington 1984:49-55).

As a theoretical overview, Errington mentions C. Geertz's overview, saying that a fundamental characteristic of humans is to seek meaning and that culture is a system of meaning. Culture in this view provides conceptual order by furnishing the concepts about social, physical, and spiritual reality, which enable individuals to interpret and thus to comprehend their experience. According to the justification for

symbolic anthropology, in particular, a primary objective of anthropology is the understanding of cultural views of reality or the understanding of the process by which these views are employed to render life intelligible. Process of interpreting experience follows and sustains the cultural system of meaning. Therefore, the Minangkabau emphasizes the Minangkabau language and the interpretation of customary law which contains suggested these constituted fundamental aspects of their culture.

Their emphasis on the Minangkabau language as a set of social forms of obligatory importance discerns the Minangkabau concepts about the nature of social form in general. This would give access to their Minangkabau context of thought, by which they understand their social forms in particular. It takes on the recommendations to try and to research to understand that the Minangkabau is to understand their preoccupations with the Minangkabau language and the interpretation of customary law, in order to clarify the relationship between the way how people conduct their lives and how they construct their consciousness.

As for the culture of the coastal towns, bearing the stamp of the Minangkabau customary law tends to be more male-oriented and less democratic. In this strong matrilineal society, which probably is the largest in the world, titles, properties, and family names are handed down through the female line. Man's children are not his heirs. Instead, he is bound to leave his possessions to the children of his eldest sister. His nephews and nieces are therefore those who could inherit from him. The grandmother is the grand matriarch, with her eldest brother or first son who is considered as the family representative. Houses are very much the domain of women. Daughters usually inherit properties from collective works, and women own most of the shops. In Minangkabau society, each child bears the clan name of his or her mother.

Membership in a clan, or 'the right to use its land and the right to a clan title', is transmitted by the mother's or grandmother's brother.

Minangkabau villagers embrace the matrilineal kinship system. The most unique social tradition in villages could be observed in the traditions of marriage and death. According to the tradition of marriage, women buy men, which means that women who have to pay marriage costs and dowries. In this tradition, there are concepts of money 'lost' and money 'pick up'. The former money is used to reimburse the parents for his son, in the form of money or goods such as motorcycles or cars. Replacement of the missing money is dependent on the level of education and the work of these men; if his educational level is high, the loss of money is also high. The latter money is paid during the implementation of the wedding, with the money for picking up in the form of old silver coins. In this marriage tradition, there are customary processions, i.e. lowering the bride from her mother's house (*bundo kanduang*), the hair shaving ceremony (*balatui badia*), and picking up the groom (*bagalombang duo baleh*).

The funeral tradition at the village of South Tiku is also unique. It is named the customary law stand (*batagak adat*) with eat together (*bejamba*); each family, neighbors, and relatives in the village of South Tiku bring food and then pile into a lot of plates. After all the foods are prepared, the prayer (*dzikir*) is performed together. The prayer ceremony is conducted after 3, 7, 14, 40, and 100 days from the funeral.

## **10. Inheritance**

The Minangkabau inheritance system runs matrilineally; basically, the inheritance moves from female grandmothers to mothers, and then to daughters along

the female line. Husbands frequently work in agricultural fields, which their wives own. Even if they work hard there, however, they do not have any inheritance rights for the fields. On the other, their children could inherit these properties from their wives or the children's mothers. Even after marriages, husbands continue to belong to their mothers' houses; the properties of husbands pass to their sisters' children, not to their wives or children.

The authority within a lineage or sub-lineage is in the hand of the mother's brother, not of the father. Mother's brother is the decision maker. Disputes concerning inheritance rarely happen. Not only the decision maker is powerful but also the Minangkabau has the unique consensus process. Benda-Beckman (1984:244-230) reviews the process of deliberations leading to consensus in the Minangkabau. The decision making process (*sakato* or *mufakat*) is reached by all those involved in the problems to be solved. This process, says Benda-Beckman, is considered to be the basis for Indonesia's particular form of democracy, especially among the ethnic group of Minangkabau.

## **CHAPTER III**

### **ORGANIZATIONS AND SOCIETIES**

#### **1. Introduction**

The successes of local institutions for the management of coastal resources depend primarily on the ability of local communities to organize themselves as collective action groups by themselves. The local institutions might use the collective action to improve livelihoods, to ensure ecosystem resilience, to improve fishery productivity, and to ensure sustained availability of environmental services. The local institutions as a system of values apply to organizations to facilitate coordination among people in obtaining their expectations appropriately. The local institutions provide a structure for interaction and human behavior (Martial 2016:9-10).

The local institutions having a system of rules in changing behavior could also be classified as organizations, which are political bodies such as political parties or parliaments, economic bodies such as firms or cooperatives, social agencies such as associations, NGOs or the mosque, and educational bodies such as schools, universities, or training centers. Theoretically, local institutions in this study mean their rules, although they could not always be classified as institutions. Good institutions could ensure the sustainability of the system and finally they secure the development as internal dynamics of the local community (Martial 2016:10-11).

The local institutions for the coastal resource management at the village of South Tiku are as follows: village consultative body, village's customary representative, female customary law, youth, community empowerment agency, fishermen's groups, and tourism conscious group. The role of local institutions at the villages of South Tiku, which is formally indicated by the village consultative body,

consists of 5 elements, viz. customary law leader, intellectual, religious leader, customary law female, and youth (see Table 8). They design village's regulation and village's development, develop budgets, establish village's definitive planning, or supervise or control village program aspirations. The community empowerment agency could promote public participation for development, and assist the village leaders' task. The village's customary representative at the village of South Tiku consists of 29 customary law leaders, which functions in the maintenance of general issues. The village's customary representative participates in directing the village's policy simultaneously.

**Table 8. Local Institutions in the Village of South Tiku**

<b>Village</b>	<b>Public Sector</b>	<b>Central Sector</b>
South Tiku	Village Government	Village's Customary Representative (KAN)
	District Government	Community Empowerment Agency (LPM)
	Regency Government	Bundo Kanduang
	Village Consultative Body (BPN)	Youths
		Fishermen Groups Tourism Conscious Group (KSW)

(BPS-Statistic of Agam Regency 2017:3)

The village's customary representative determines claiming of individuals' or groups' rights in the village of South Tiku. The village's customary representative is a kind of the customary law leaders' unity which is a representative of the clans at the village of South Tiku. The village of South Tiku is customarily managed by Jambak and Koto Piliang clans, so that the right for islands is also governed actually by the village's customary representative. This rule is not written, but it is validated by the

village. In the village of South Tiku, the mechanisms of development consultation involving all the customary law leaders determines the direction and the execution of development into a capable force of moving entire village's people, involved in the village development. Consequently, the claim to islands rights at the village of South Tiku could run well with less of different ownership. The conflict resolution through traditional mechanisms have been done well.

According to L. N. Rasmussen and L. Meinzen-Dick (1995:22-37), the role of these institutions in regulating resource management is related to the limits and access to their resources, including users, the rules of allocation, user contributions, monitoring and sanctions, and conflict resolution. As mentioned by Benda-Beckmann and K. von Benda-Beckmann (2014:20-25), the arrangement of resources among Minangkabau people is complex of human-property as a collective unity in any respect and internally differentiation in utilization, rights, and individuals authority.

## **2. Dynamics of the Social Organizations**

Activities in the coastal rural economy is dominated by the efforts of small-scaled fishing with the main actors of fishermen, fish workers, traders and fishery inputs, processing industries, and household industries. However, small-scaled fishing faces the classic problem with limited availability of capital. D. Johar (2016:40-42) says that the government has recognized the weak capital of economic actors in the rural areas. The central government has launched several programs for the credits to farmers and small farming businesses. Starting with the Governmental Package-Deal Credit Plan (*BIMAS*) in 1972, the Credit of Small Investment (*CIC*) and the Loans of Permanent Working Capital (*KMKP*), the Project Income for Farmers and Fishermen

(*P4K*), the Credit of Farmer Business (*KUT*), and the Credit of People's Business (*KUR*) have been institutionalized. Although the government has implemented a variety of loan programs, the achievements of results are still not deemed to be in line with expectations. The performance of financial institutions has not been satisfactory, especially in the financial institution as the executor. Nuwirman (1998:22-34) mentions that the raising of capital exists in the form of principal savings, mandatory activities, or voluntary activities at aligning group institutions and the local banks in the Province of West Sumatra.

The social organizations at the village of South Tikur have the norm or customs which have a structured and patterned continuity to meet the needs of the community members, closely related to the livelihood of the fishery sector in the coastal zone. In the life of the fishing community, fishermen are parts of social institutions that facilitate social interaction or social interplay in a community. The fishermen also have a strategic point or entry point in moving fishery system in the coastal zone. For that, all available resources in coastal areas need to be directed priority to increase the professionalism and bargaining power of social groups of fishermen. Currently, the portrait of the fishermen, recognized by social institutions, are still not as to be expected.

The fishermen are generally going well, which is caused by the group of fishermen. They are generally established on the basis of technical interest to facilitate the coordination if there is an activity or a government program; so, it is the orientation of the program to ensure independent groups to be sustainable. Participation and cohesiveness of the group members in group activities are still relatively good, and the level of attendance of members at group meetings is quite high. Management activities



are run by productive members of the group, but productive activities or business group members always face the difficult issues of capital, volatility, and limited marketing channels. The formation and development of institutional use a local social capital base with the principle of local autonomy, which is achieved through the principles of autonomy and empowerment.

Formation and institutional development, which is based on the concept of a blueprint approach, are uniformed. The institutional introduction of outside attention to local institutional structures and networks and the peculiarities of the economic, social, or political running have already existed. Formation and institutional development, which is based on the bottom-up approach, are led to the growth of public participation. Institutional construction tend to strengthen the bonds of horizontal, not of vertical. Members of an institution are composed of people with the same type of activity. The goal for the cooperation established in the later stages of their bargaining power is expected to increase. The vertical ties are left to the market mechanism, which is difficult to be reached by government authorities.

One of the problems faced by fishermen at the village of South Tiku is the weakness regarding their capital. As a result, production levels and inefficient business scales are low, because generally they are always entangled with debts. Because of the financial problems, they are forced to be at the bargaining position when a famine happens. The approach to development through the eyes of local autonomy implies that all stages in the process of empowerment are done in a decentralized manner. The empowerment, which is based on a decentralized approach, fosters an autonomous state, where each component continues to exist with a variety of contained diversities.

The development of social institutions among fisherman for this is going due to the developing local institutions that live on the coast, because it is considered to give an adequate economic life to each fisherman. The institutional characteristic in traditional societies, where economic activity is inherent, is the institutional kinship and community. The economic fulfillment is the responsibility of communal genealogical groups. The main characteristic of traditional institutions is a bit institutional, but having many functions, which is not similar to the case with the modern society which is characterized by the emergence of many institutions with specific functions. Local self-reliance shows that more precise construction when it is viewed as a process-creative adaptation of a society rather than as a series of mechanic efforts refers to a plan, which is drawn up systematically. It also confirms that each organization should be managed to promote the participation and dialogue more than the spirit of the strict control as practiced so far.

The fishing groups at the village of South Tiku are divided into 5 groupings of institution, viz. fishing groups, fish processing groups, fish farm groups, business groups, and community watchdog groups. L. Zamzami (2011:39) described that characteristically the fishing workers are using relatively small machines or outboard motors. By using such simple tools, they could catch only a small amount; the technology used for catching or processing fish are still simple, because of the low level of educations and skills. These characteristics results in using simple fishing equipment such as boats with outboard motors and simple fishing gears. The catch is extremely low in comparison with one by modern fishing equipment.

In addition, the potential limitations of the capital of fishing effort exist at the village of South Tiku. For example, fishing gears sometimes belong to someone else.

Fishermen give their catch to their fishing skipper, who own the gears; its 65% to 50% for the fishing skipper and 15% for the damage of gears. Fishing activities carried out by fishers at the village of South Tiku almost the same as other fishing activities in various areas in the western coast of Sumatra. Fishing activities along the west coast of the Province of West Sumatra are mainly done by seines and trawls (Zamzami 2011:115-117).

### **3. Descent Groups**

As I frequently mention, the Minangkabau practices the matrilineal descent system; the clan material wealth is passed down matrilineally. The ancient history of the origin of the Minangkabau matrilineal culture is still unclear, but it is told through various versions of oral traditions (Hermayulis 2007:1-19). Minangkabau descent groups vary in size, having the segmentary organization, which depends on the vicissitudes of reproductive and economic success over many generations. The largest descent at the village level is the matriclan (*suku*). Each village is composed of four or more exogamous matriclans. Every villager takes his or her family name from his or her matriclan when he or she is born. Each matriclan is sometimes subdivided into a few subclans, but they are also referred to as clans frequently, except when villagers would like to distinguish subclans from other segmentary levels of groupings, viz. clan and lineage. However, subclans could elect the leaders as symbolic office and the members could consider themselves still to be close relatives, although they usually cannot trace the actual genealogical relationships between them. Each clan or subclan is further subdivided into genealogically isolated lineages, for which there is no special indigenous term. Each lineage, having a ceremonially selected male headman, owns its

own properties, including agricultural lands, houses, fish ponds, heirlooms, and miscellaneous customary law titles (Kato 1984:3). Each lineage is further subdivided into several lesser units, i.e. sub-lineages (*paruik*), each of which has a male head as well. The sub-lineage is the primary corporate landholding units. Finally, each sub-lineage consists of several domestic groups (*urang sapariuak*), and then each of these groups consist of a few small families (*jurai*).

Characteristically, the Minangkabau matrilineal system is not only a descent organization, but also social, economy, and leadership organizations. Therefore, this system has shaped the Minangkabau way of life, being harmonious and peaceful to the people. Women wield substantial powers and roles within the matrilineal system, as they are regarded as the continuing factor to the heritage and the source of future generations (Asri 2004:27-38). Thus, Minangkabau women are called customary law females (*bundo kanduang*), having general acknowledgments and respects. They are also thought to possess excellent leadership skill, charisma, and wisdom in planning the economy (Hermayulis 2007:1-19). According to Asri (2004:28), the concept of family inside the Minangkabau matrilineal community is different from that of family in other cultures. A family in a Minangkabau community consists of a mother, her relatives, her daughters, and her grandmother on maternal side. On the other, a family in other cultures generally consists of a father, a mother, and their children. A man who marries a Minangkabau woman could become a husband and father, but he is not regarded as a part of his wife's family. He is called as a newcomer or as a foreigner (Hermayulis 2007:1-19). In reality, males inside the matrilineal system are not of priority, unless they are from the maternal side.

#### **4. Marriage and Affinal Relationship**

Inside the matrilineal system, the most important structural positions are that of the maternal uncle and then that of the mother's children. The customary law strongly regulates these positions. The maternal uncle is positioned as the guardian of the mother's children, and he is directly accountable for their well-being (Kato 1984:7). As he is always elected as a leader of his mother's to house (Widya 2001:56-65), he acts as a medium between sub-lineages or supervisor of many ceremonies and customary rituals held by his clan (Asri 2004:28). Once a woman reaches her marriageable age or marries, it is her mother's brother job to assign her a new room in his house. If there is no enough space, he must build an annex to the house or build a new house.

Her husband is only allowed to come over at night to his wife's house. Sometimes, he looks like a seed bull borrowed for impregnation. In many ways, he is not much more than his wife's relative. When the children mother dies or she divorces, they remain in her house, and the personal tie between their father and them is fading. However, their father or his sub-lineage members must continue to give ceremonial gifts to his children (Kato 1978:6-7).

A married man usually have 2 local residencies; he stays in his wife's house at night, while he has to return to his mother's house during the daytime. It means that he belongs not to his wife's customary law world, but to his mother's one. When boys are six years old, they are sent to live in prayer houses or mosques, where they learn to recite the Holy Qur'an. They return daily to their mothers' houses for meals, but not often for other reasons. For every boy, his mother's house is his 'house of origin' only and nothing more than that. Only after he marries, he is allowed to live in his mother's house for 24 hours. If his wife dies or divorces, he goes back to live in the prayer

house or others. He spends most of his time at prayer houses, mosques, coffee shops, council halls, or small guard huts built on the edge of rice fields (Kato 1978:8).

The Minangkabau house is a residential structure, which is inhabited by Minangkabau people in the Province of West Sumatra. Besides being made as a home, this house is regarded as the symbol of pride of the clan in every Minangkabau community (Soeroto 2005:39-40). Therefore, this house is often considered as a common property owned by the clan and it is always nurtured and well preserved; it will never be sold or never given to other people outside of their bloodlines (Soeroto 2005:39-45). Initially, the Minangkabau house was a traditional residential house only. After some evolutions, however, this house becomes as an official place to conduct customary ceremonies as well. Therefore, the Minangkabau house is also called a customary law house (*rumah adat*). Many sorts of customary law events such as the election of a new leader, guest-welcoming ceremonies, and healing rituals for sick family members take place inside the house (Widya 2001:55). Usually, this house is resided by an extended family, spreading several generations, which consists of, for example, grandmother, mother, daughters, and granddaughters (see Figure 5).

According to the matrilineal customary law and rules, mother and her daughters are given the special privileges to become permanent residents and heirs of the house. Her son who reaches the age of 6 years old leaves the house and stay at the prayer house or mosque, owned by the clan. Men belonging to the mother's descent group take the responsibility of managing the house, and they make sure the customary law activities run smoothly. They also need to ensure that the administration of the Minangkabau house continues to be well preserved. The male leader of each house or

each sub-lineage is elected amongst matrilineal relatives, who actually live inside the house, being the mother's brother usually.

Generally speaking, the Minangkabau house is easier to be recognized from its physical aspect. The sharp-tipped design of the roof, like a pair of water buffalo's horn, discriminates the Minangkabau house from other traditional houses in the Indonesian archipelago. The roof is multi-tiered with upswept gables. The design is unique, and every element of the architecture is related to the custom and culture practiced by Minangkabau people. The solid customary law and rule shape the architecture of the Minangkabau house as it is. The design is suitable for natural phenomena and it is harmonious with residents living inside the house. There are some natural elements, which are basic concept and philosophy of the design and architecture of the Minangkabau house, which consist of individual world of man (*alam manusia berindividu*), communal world of man (*alam manusia bermasyarakat*), and invisible world of man (*alam yang ghaib*) (Nasroen 1957:22). According to Asri (2004:28), these features are seen at the roof design of the Minangkabau house, which has at least 4 gables. The roof symbolizes as the head of a human body that gives harmony to all other parts.

Besides the roof, the pillars also have their analogy and functions inside the Minangkabau house. The brilliance of the design of the Minangkabau house creates the architectural features that shape the house. These features give a huge impact upon the harmonious design of the natural environment. The Minangkabau community thinks the outspread nature as teachers (*alam takambang jadi guru*), of which concept is used as a reference to build the Minangkabau house. It could produce a brilliant architecture compatible with the environmental nature. Until today, the Minangkabau

house stands strong and maintains its dynamic architectural characteristics with the environmental concept.

**Figure 5. Room in a Traditional House for Clan**



The most important architectural feature, which could be observed in the Minangkabau house, is its own symbolic meaning. Nature has taught man that every living creatures depends on each other and gives mutual benefits to one another. This cultural philosophy of Minangkabau people has manifested in the Minangkabau house through the ornamentations and carvings of the walls, ventilations, natural lightings, and building materials. All these natural components could create a brilliant structure of the Minangkabau house. In reality, every design of the Minangkabau house comes from the thoughts and understanding of the community in interpreting a phenomenon



to bring serenity and harmony to the residents involving individuals, families, and communal villagers.

The Minangkabau house in the Province of West Sumatra could be divided into 2 types according to the customary law. The house following the Koto Piliang custom is known as a balcony house (*rumah beranjung*). This house has a balcony (*anjung*) and hierarchical floors as a symbol to the autocratic rule. The Minangkabau house following the Bodi Caniago custom is known as a house without balcony (*rumah tidak beranjung*). This house has neither balcony nor hierarchical floor, having same-leveled floors, which symbolizes the democratic rule (Is 2000:55). Although the structure is different, both types of the Minangkabau house are built on the same concept and values of belief, philosophy, ritual, custom, and culture of the ethnic group of Minangkabau (Soeroto 2005:32). Both houses need the same construction process as well.

## **5. Relationship in Fishing**

In the relationship of fishing, fishermen use various ways to address the financial problem in their households. Besides formal financial institutions that are rarely tapped by them, fishermen usually borrow money from their families, relatives, friends, and even brokers in the village. Small-scaled fishers still have some problems in accessing capital from formal financial institutions such as commercial banks, because the patron-client relationship is stronger in fishermen life. In this dissertation, the patron means a middleman who provides the capital money to fishermen. On the other, the client is a fisherman.

The small-scaled fishery at the village of South Tiku is organized in the patron-client relationships, where fishermen as clients deliver fish to middlemen or fish buyers as patrons who sells it at local or regional markets. This relationship looks to go beyond the commercialization of the fish, because patrons provide the security and the insurance to fishermen in times of personal needs or hardship. In recent years, its relationship seems to become more common in small-scaled fishery globally. At the same time, it is criticized as unequal, exploitative, and unsustainable. Middlemen could give strong influences on fishermen choices and actions, because fishermen's livelihoods depend on their patrons. It has been hypothesized that this relationship could contribute to overexploitation of a fishery as patrons determine fishing efforts, which are based on the market demands rather than the state of the fish population.

Female activities, especially wives' activities, at the village of South Tiku are observed in particular in the local economy concentrated in the informal sector. Their efforts and successes are invaluable in helping their husbands to support the economic viability of their households. The wives are also sometimes required to participate in finding additional incomes to meet family needs. Usually, therefore, not only they stay silent at their houses to do nothing and spend their husband's incomes from fishing, but they are involved in economic activities to earn a living.

The role of women for household incomes begins when the fishing boats start coming back from fishing and bringing the catch. At the village of South Tiku, especially in Pasie hamlet, women have a significant role in selling the catch. Parts of these women are wives of onboard fishermen. They take the responsible for selling the catch at the marketplace or at the place of Fish Auction Market (*TPI*). When fishing boats come back, a large number of women who are wives of fishermen of those

fishing boats wait their husbands who land at the place of Fish Auction Market. They help their husbands to discharge fishing boats of its catch, then bring it to the selling places. On the other, fishermen take a rested in the stalls around the landing site, or directly go home.

Selling fish is mainly coordinated by the wife of the boat owner or by a person whom the boat owner trusts. Most catch are sold to middlemen (*toke*). The middlemen sell fish, either in markets at the village of South Tiku or in ones at other villages, but sometimes they sell it at the regional market. The role of women in the marketing of the catch does not provide the direct revenue contribution for their household incomes, because it is only a helping activity for the boat owner's wife. She controls all procedures and she divides the whole catch among all fishermen according to their respective rule of distribution. The owner of the fishing boat receives a share of 60%, while the rest is divided equally among all boat crews. If wives are middlemen, however, this situation is different, because the middlemen could receive the profit from the price difference between buying and selling. The average income of each household, received by fishing, ranges between IDR 10,000 and IDR 50,000. The amount of revenues depends on the amount of cash which they could prepare. If they have a lot of cash, they could buy fish in large quantities to sell and marketed at the markets in other villages or even in the regional market.

In the village of South Tiku, especially in Pasie hamlet, besides selling fresh fish, some use fish for processing. The boiled fish (*pindang*) is one form of processing for preserving fish, which is cooked in ovens made of clay. The boiled fish could increase its value and durability, which reduces the risk of decay if fish is not immediately sold. The boiled fish is sold to some middlemen, who sell it in markets or

to pitchmen. In the village of South Tiku, especially in Pasie hamlet, one women's productive activity other than selling fish or boiling fish is making fish snacks (*rakik maco*), which are savory and spicy chips from rice flour laced with tiny sea fish on their topping. On average, they could make snacks as much as 5-10kg per day. This job could complete within less than half a day.

At the village of South Tiku, the fish salting activities are also observed. Some types of fish having a low economic value is processed into salted fish. The purpose of this activity is to preserve fish as well as to boost the economy. At first, freshfish is cleaned and sliced, then covered in salt, and finally dried under the sun. Many could find wooden long planks for the drying space in the village of South Tiku.

These processing activities are often done by daughters. They use their free time after school to help their parents. Indeed, they have to do the daily chores, such as cooking, shopping, cleaning, washing, taking care of their small brothers and sisters, but, in addition to these routines at households, they frequently engage in productive activities, such as cleaning fish, peeling shrimps, or simply waiting for the catch at the place of Fish Auction Market. The emergence of small rural enterprises has an impact on the increasing role of women for household incomes. Women's contributions for household incomes have been increased. Women's activities are no longer limited to the marketing activities of the catch, but, in addition to such traditional jobs, they start to engaged in several new productive works.

At the village of South Tiku, many wives engage now in new jobs for their household incomes. Wife's involvement in household economy receives the strong support from their husbands, because these additional works do not interfere with her original duties as housewives or mothers, and they could meet the extra needs of

everyday life. Seeing the role of women in the livelihoods of households, mainly in rural zones, is significant.

The previous studies show that the role of women as economic actors used to be underestimated. The technical support is required to help the role of women in social and economic activities to allocate more time much on productive activities without leaving its role in domestic activities. Various studies in developing countries have shown that the role of women in household economy is enormous. Those women have strong roles in the domestic economic activities. Contributions to the aspect of the economic activities are not matched with a role on the aspects control or decision-making, as the decision-making body in households are always dominated by husbands.

The role of women in coastal areas is relatively higher in terms of post-harvest activities and livestock management activities than agricultural activities. The women's participation is almost zero concerning agricultural activities, while some of them participate in non-agricultural activities such as making handicrafts and sewing. On the other, women in the households of fishermen contribute for their household incomes through a variety of economic activities. In most cases, however, women's participation in decision-making processes regarding various housekeeping is still lower than men at fishing villages.

Increasing the role of women is caused by the change of socio-economic conditions of the household. Households need to be one of the main financial factors from women's works outside their homes. Although in most developing countries the women's position is inferior to the man's one, shifting in roles is of frequently occurrence. Inevitably, cultural values in the society have to be compromised with increase household needs.

## **CHAPTER IV**

### **FISHERIES IN INDONESIA AND THE PROVINCE OF WEST SUMATRA**

#### **1. Introduction**

The Djuanda Declaration on 13th December 1957 defined Indonesia as an archipelagic state. The concept of archipelagic state is recognized in the United Nation Convention on the Law of the Sea which was ratified by the Republic of Indonesia, with the Act No. 17/1985. This recognition presents a broad responsibility to manage, secure, and sustainably utilize Indonesia's territorial waters and all of its resources. It requires excellent maritime capability, supported by developed human resources, a significant amount of financial resources, and modern technology. The Ministry of Marine Affairs and Fisheries' mission, functions, organizational structures, and its position in the cabinet are determined by the Presidential Decree No. 165/2000 issued on 23rd November 2000. The Presidential Decree No. 9/2005 stipulated that the primary mission of the Ministry of Marine Affairs and Fisheries assists the President of the Republic of Indonesia in holding the process of governance in the marine and fishery sectors.

Under existing Indonesian fishery laws, the Ministry of Marine Affairs and Fisheries has the management authority over marine waters beyond 12 nautical miles from the shore. The decentralization of fishery governance, which disperses fishery management authority among 3 levels of government, severely complicates fishery management with issues that should address in the immediate future. The 2 important matters are licensing of fishing operations and the management of transboundary fishery.

The vision of the Ministry of Marine Affairs and Fisheries is for Indonesia to become the most significant fish producing country in the world. The conservation plays an important role and it should become a common concern because marine conservation programs could ensure the success in achieving sustainable fishery. In addition to its role in counteracting resources degradation due to various human exploitative activities, aquatic conservation programs also play an essential part in providing productive areas for fishery, both of fishing and of aquaculture. Therefore, the developing plan is expanding marine conservation areas to reach 20 million hectares by 2020.

As the government system has been changed from centralization to decentralization, the implementation of marine conservation is no longer the monopoly of the central government. Because of autonomy and decentralization, in other words, local governments and communities are given the authority to conduct marine conservation within their right and power. Recognition of such involvement or participation dispels the apathy of local communities, who hitherto have always been positioned as objects in the implementation of governmental programs. Therefore, community involvement in conservation activities is a guarantee for the continuity of the plans to achieve sustainable fishery resources and ecosystems.

The decentralization of governance grants the authority to issue fishing licenses to each of the 3 levels of government. The Ministry of Marine Affairs and Fisheries gives a fishing license to each of fishing vessel more than 30 gross tons. No permissions are required for fishing vessels less than 5 gross tons. Fishery management authorities rely heavily on the limited licensing to control fishing efforts.

The Provincial Fisheries Office of West Sumatra has the sole authority to control fishing gears, which suggests the potentiality to create new laws or regulations to manage the fishery with controlling gears. After the broad buy-in restricting for the use of trawl nets, which has already been done in regards to the area of operation, Indonesia, for example, made the use of trawl nets in the Arafura Sea allowed only under certain conditions. There are several options available to the Ministry of Marine Affairs and Fisheries, that would be effective in controlling fishing effort and fishing mortality. The ministry could cap the number of trawl nets presently in use, and it also introduces a new law allowing permit holders to use trawl nets to transfer the net entitlements among themselves with a percentage reduction in remaining eligibility reverting to the ministry on each transaction.

The Act No. 31/2004 on fishery, as amended by the Act No. 45/2009, states that marine resources conservation efforts is needed in the form of safeguarding, conservation, and utilization of fishery resources, including ecosystems, species, and genetics to guarantee their existence, availability, and continuity. The preservation of fishery resources was strengthened by the Government Regulation No. 60/2007. On the basis of these laws, the Act No. 32/2004 on regional governance, which was finally amended by the Act No. 12/2008, the Ministry of Marine Affairs and Fisheries initiated the formation of marine conservation areas in Indonesia, in particular, the development of regional marine conservation areas. The management of marine conservation areas could be done by the central or local governments. According to the Government Regulation No. 60/2007 about fishery resources conservation, each marine conservation area is a protected marine conservation area, which is managed by a zoning system, to achieve sustainable management of fish resources and environment.



In terms of the type of ecosystem in the area, the marine conservation consists of inland marine conservation area and marine aquatic conservation area. As for marine aquatic conservation area, which is managed by local governments, it is more widely known as regional marine conservation area. According to the Ministry of Marine Affairs and Fisheries, the target for marine aquatic conservation area will be approximately 10 million hectares by 2010 and 20 million hectares by 2020. For the time being, 36 locations have been reserved for marine aquatic conservation areas. 35 locations are marine aquatic conservation areas reserved by local governments. Only one location is a national aquatic conservation area, i.e. Sawu Sea Aquatic Conservation Area in the Province of Nusa Tenggara Timur.

Fishery is an important source of employment and livelihood for millions of people in the world. In 2004 approximately 41 million people worked as full-time or part-time fishermen or fish farmers, while 39 million in 2000. The majority of fishermen and fish farmers are small-scaled artisanal people, earning a living from coastal and inland fishery resources. The vast majority of these were from Africa, Asia, and Latin America, with close to 88% from Asia (FAO 2007; Sharma 2011:41-61).

For many communities, fishing may only be one of several livelihood activities. Thus, these communities might seasonally, and on a part-time basis, engage in farming, fishing, aquaculture, rearing livestock, community-based tourism, and similar events. Sometimes, at the same time, they might fish only for domestic consumption. The fishery sector is known to make essential contributions to the national economies of several countries, especially of some of the least developed countries. There the contribution of fishery to local and household economy is significant. In other words, the input is significant, due to its upstream and downstream activities, such as

construction of vessels, purchase of engines, fabrication of fishing gears, purchase of fuel, ice, food, or bait, buying packaging materials, processing fish, marketing or retailing activities, and so on. In many rural areas with few employment opportunities, fisheries are often the primary drivers of local economies (Sharma 2011:41-61).

Fish is an essential source of food security worldwide. It is as important to highlight that 50% of all food fish originates from small-scaled fishery, and almost all fish from small-scaled fishery are used for food (FAO 2012:5-6). Productions from the sectors are, in general, more directly available to the diversified and remote populations at affordable prices. While small-scaled fishery caters primarily to domestic markets in several countries where its contributions to export markets and earnings are increasing. It has often be pointed out that small-scaled fishery is relatively multiplying.

P. Semedi (2003) presents a study of chronological order and comprehension of fishermen in northern Java coast. In the village of Wojokerto Kulon near the city of Pekalongan, the Province of Central Java, almost all fishermen are poor. In addition, there are the fishing industry by fishermen, the relationship between fishermen and boat owners, and fishing enterprises there. Besides the social and economic aspects, the government intervention through political parties on the fishing community is observed.

However, this study focuses not only on the coastal fishing communities in the village of Wojokerto Kulon, but also emphasizes on its court culture and agrarian leaderships which create a less appreciative of maritime culture. The court and agricultural culture adhere to this fishing village in northern Javas coast. At the city of Pekalongan, the traditional clothing (*batik*) industry and fishery sector are 2 major

economic activities that could not be separated. The traditional clothing industry that has grown long contributing to developments of fishery activities. Many entrepreneurs of clothing industry who succeeded in their business also invest their capitals for developing marine fishery companies to be the owners of fishing vessels or of fish ponds. Along with the deterioration of traditional clothing industry, however, the economic activity of the companies and labors at traditional clothing industry has shifted to the fishery sector. During the colonial era, the port of Pekalongan port was busy with exporting sugar, tea, coffee, and rubber, but the primary job was sending traditional clothing out. Along the coast, the village of Krapyak Lor, the village of Krapyak Kidul, and the village of Long Eetan have fishermen who live in the city of Pekalongan. The port of Pekalongan has already become quiet and not too busy; only very small fraction fishermen from the village of Krapyak Lor sell their catch there (Semedi 2003: 35-55).

D. Adhuri (2013) did an ethnographical study of several coastal communities in the Kei islands of eastern Indonesia. The argument of this research is an instance where the systems of local marine resource management are analyzed under the concept of community coherence and unity. The communal marine tenure system in the Kei islands is a complex phenomenon that concerns the relationship between humans and their environment, and the relationship between groups where it is used as an instrument for political positioning of entities within and between communities.

The composition of various local communities on the Kei islands shows the range of differences that exist in them and how these differences affect marine tenure and resource management. It challenges ideas that local populations possess sufficient environmental knowledge to understand the intricacies of local ecosystems, or that

shared local knowledge of these resources even exists. Recognizing all of these limitations highlights the politics of local and regional competition for resources. This kind of contribution of local knowledge and community involvement in marine management is still indispensable.

The perspective presented in this study considers marine tenure in a broader social context, incorporating how traditional marine mandate is embedded in the social world of the community. An understanding of how people perceive and practice customary marine tenure should reflect the social structure of community and, in particular, demonstrate the importance of power play in determining marine tenure and management practice. Understanding of marine resource management with a superb ethnographical accounts of contemporary village life in the Kei islands, as features of social life, is distinctive to any societies of eastern Indonesia.

Indonesia with its marine potentiality is a country, about the three-quarters of which is covered by the sea. As a country with around 17,508 islands, Indonesia is known as the largest archipelago in the world, with the maritime areas of 5,800,000km<sup>2</sup> and it has the second longest coastline in the world, having 81,000km long. With its location and condition, Indonesia has various natural resources and unique floras and faunas throughout the country. The coastal and marine resources in Indonesia are unequalled in density and diversity in comparison with other parts of the world. It is known that these tropical coastal areas are affluent in coastal and marine ecosystems, comprised of coral reefs, mangroves, estuaries, beaches, and their associated fishing activities. The catch by them from local regions supply about 10% of the global fish catch.

Indonesia is a significant global producer of fishery products from both openwater fishery and aquaculture. In 2011, Indonesia produced 13.7 million tons of fishery products, including 5.2 million tons of aquatic plants, which was accounted for 7% of the world's production (FAO 2012:35). Since 1990, Indonesia's fishery production has increased by an average of 7% per year. Regarding national agricultural GDP, the fishery production in Indonesia contributes over 10% of national agricultural GDP. Indonesia is the world's second-largest producer of aquatic plants and fourth largest aquaculture producer.

Indonesia, the world's largest archipelago, has to control over vast and fish-rich sea and waters. As such, the nation has already been ranked as the fourth largest producer in aquaculture. As for other economic sectors, however, Indonesia is yet to tap the full potentiality of its fishery sector and to optimize profitability. The improvement in efficiency is crucial to boost both quantity and quality of Indonesian seafood products. Most local fisherman still use traditional and non-efficient technique as well as equipment. The high quality products in this sector are also expected to boost demand from foreign countries for Indonesian fishery products, such as fish, shrimp, or crab.

On the basis of the latest data from the Indonesian Statistics Agency, the fishery sector in Indonesia was expanded to 8.37% in the third-quarter of 2015, considerably being higher than the nation's overall economic growth at 4.73% in the same quarter. Indonesian exports of fishery products stood at USD 244.6 million in October 2015, while imports only reached USD 12.5 million, implying a trade surplus of USD 232.04 million. The growth of Indonesian fishery sector is primarily supported by the increasing productions of both captured and cultivated fish. According to data

from the statistic yearbook of Indonesia (BPS-Statistic of Indonesia 2017:290), the output of caught fish rose to 5.03% at 4.72 million tons, while the production of farmed fish rose to 3.98% at 10.07 million tons, up to the third-quarter of 2016.

Despite of the global uncertainties and the sluggish of global growth, the minister of the Ministry of Marine Affairs and Fisheries was optimistic about the growth of Indonesian fishery sector in 2016, as the central government had earmarked IDR 13.8 trillion, approximately USD 1 billion, state budget for the Ministry of Marine Affairs and Fisheries in 2016, which was 31.4% up from the allocation in 2015. The general director of fish cultivation at the Ministry of Marine Affairs and Fisheries is also optimistic, saying that cultivated fish production would rise continuously in the years ahead as fish cultivation areas are vast in Indonesia, and yet remain mostly unused. Currently there are 11.8 million hectares for fish cultivation in saltwater, 2.3 million hectares for fish cultivation in brackish water, and 2.5 million hectares for fish cultivation in freshwater.

The growth amount of captured fish in Indonesia is also expected to expand on the ending of the moratorium on the issue of fishing permits to those who use ex-foreign fishing boats. This moratorium, which once ended in October 2015, was again imposed in November 2016 after Indonesian fishermen were using ex-foreign fishing boats for illegal fishing activities in Indonesian waters. The Ministry of Marine Affairs and Fisheries targets the growth amount of production of captured fish to 2.4% at 6.45 million tons in 2016, while the increase in the output of cultivated fish aims to 8.72% at 19.5 million tons. The chairman of the Indonesian Fishery Product Processing and Marketing Association (AP5I) says that the production targets of the Ministry of Marine Affairs and Fisheries are possible as the warmer weather which might be

caused by El Nino to boost the growth of fish population. He states that there are ample amounts of fish in Indonesian waters, but the weak quality of vessels and equipment is the reason why the amounts of its production is still relatively low.

He also expects to see the higher demand for Indonesian fish from foreign countries as the Indonesian government has been combating illegal fishing in its waters. Over the past few years, there were several cases, in which foreign fishing boats, used by Malaysian, Thai or Vietnamese fishermen, which did illegal fishing inside the Indonesian waters, were seized and destroyed. If illegal fishing activities by foreigners curtailed, the neighboring countries would obtain less illegal fish, and then the demands for Indonesian fish export should rise.

The largest importer of Indonesian fishery products is the U. S. This country is accounted for 41% of Indonesian total fishery exports in 2017, followed by 16% by Japan, 12% by EU, and 11% by ASEAN countries. Shrimps remain the main export articles among Indonesian fishery products, followed by tunas and blue swimmer crabs. In 2016, exports of shrimp and other fishery products were risen due to the start of the ASEAN Economic Community, which did aim to enhance regional economic integration among the ASEAN member states by transforming the region into one, characterized by a free movement of goods, services, investment, skilled labor, and capital. Moreover, the U. S. scrapped import duties for 34 fisheries products from Indonesia in mid-2015, under its generalized system of preference.

## **2. Fishery and the Fishing Industry in the Province of West Sumatra**

Many fishermen in the Province of West Sumatra are still living below the poverty line. Such low levels of productivity are considered as crucial factors in

explaining poverty among fishers in Indonesia (Bailey et al. 1984:19-22). The low productivity and persistent poverty among them in the Province of West Sumatra might attribute to the technological inefficiency, the high levels of resource exploitation, and the competition for the scarce resources. Despite of the growing importance of medium-scaled and large-scaled fishery, the small-scaled subsector continues to play a vital role of marine fishery in the Province of West Sumatra. Small-scaled fishery is characterized by the low level of capital investment and required skill. Sailing fishing boats are still predominantly used to exploit marine resources. The high concentration of fishing efforts at inshore areas has led to the high rate of resource exploitation, the low catch per unit, and the low productivity.

The Province of West Sumatra has a coastline of 450km long, with a total sea area, inclusive of the EEZ waters, measuring 138,750km. In 2014, about 10% of its 5 million total population was involved in fishery activities. The number of fishermen was increased from 2000 to 2014, but it was declined after 2015. The marine fishers are constituted about 21.86% of its total fishermen population. From 2000 to 2014, the total fishery production was increased from 69,130 tons to approximately 80,000 tons. In 2014, out of 6,796 fishing vessels in the Province of West Sumatra (West Sumatra Fisheries Extension Services 2014:7-10), 62.6% were non-motorized while the rest ones were powered either with inboard or outboard engines or motors. Most of the powered boats, however, were small in size. The most widely used fishing gears in the coastal areas was the Danish-seines, driftnets, liftnets, trawl-lines, trammel nets, scoop nets, longlines, traps, and others. These gears, except trawl-lines, are used by small-scaled fishermen. The choice of gear is influenced by fishermen's knowledge and experience as well as economic and environmental considerations. Fishermen are



always flexible in their use of gears, although they usually have strong personal preferences, based on their own experiences, expected catches, and the local wisdom.

Given the complexity that exists in the fishery with multi-gears, low catches, and low incomes, policymakers are looking into alternatives to address the poverty problems of fishing communities, while they are trying to manage the fishery on a sustainable basis. 2 important aspects that might shed light on fishery policies are the issues of productivity and the technical efficiency of the different types of fishing vessels and gears.

The west coast of Sumatra is the home for thousands of fishermen who depend on fishing as a source of living. Fishing in this area is dominated by small-scaled fishers, although some larger vessels, such as purse seiners' boats, are also found to harvest the bulk of the catch around Sumatran waters. The term 'small-scaled' is used differently across fishing nations (Thorpe 2005:40). Therefore, it is essential to clarify that in Indonesia this term is usually referred to as fishing with small boats, less than 10 gross tons, which are either non-motorized vessels or vessels with outboard motors. Along the west coast in the Province of West Sumatra, small-scaled fishery plays an essential role in food security, poverty reduction, and sustainable development. However, such small-scaled fishery is often neglected in the governmental development planning, because their contribution seems to have nothing to do with the social, economic and political influence.

The cities of Pesisir Selatan, Padang, Padang Pariaman, Tiku Agam, and Pasaman Barat are coastal cities in the Province of West Sumatra, which have been the centers of the fishing network along its west coast. The Tiku coast, for example, has been at the center of landing of small pelagic fish which is then distributed across

Indonesia. There, fishing is still a dominant economic activity. In the history of the west coast in the Province of West Sumatra (Asnan 2007:15-17), the Tikus coast used to be one of the major fishing areas with the large proportion of total fish landings.

Some studies on the socio-economic aspect of fishery in the Province of West Sumatra have been done in recent decades. Before the beginning of the 21st century, however, little attention was paid to the way how the small-scaled fishing communities managed their marine resources. Although J. Kurien (2003:15), M. Bavinck, and K. Karunaharan (2006:84) suggested that there was a variety of initiatives aimed at creating an awareness about the necessity of institutions at the community level for sustainable development and management of natural resources, efforts to study the current institutional setting were still somewhat limited. Recently, however, this situation has been changed remarkably. Zamzami (2011; 2012) analyzes the fishing institutions at the city of Pesisir Selatan, and Syahrizal (2014) does ones at the city of Padang.

There are many problems in this area. Most fishermen in the Province of West Sumatra have limited ordinary fishing tools only. Their fishery skills and technology are also extremely minimal. Skills and technology used by fishermen are unsophisticated, because of the limited capitals. These conditions set a limit to start large-scaled fishery. The average income of fishermen in the Province of West Sumatra is low and erratic. The financial institutions which could be accessed by poor fishermen are not many, which is the obstacle to look for the capital.

Kusnadi and others (2010:82) argue that the conditions of coastal fishing communities in various areas are generally characterized by the presence of several features, such as poverty, social and cultural backwardness, or poor quality of human

resources. The low level of educations and knowledge are also observed among fishermen in the Province of West Sumatra; they have only the minimum educational backgrounds, skills, and knowledge. They are limited for their employment opportunities. In addition to these problems, there is an additional problem, which is the risk of accidents at sea. Often during fishing, fishermen are swallowed up in high waves, especially under the bad weather, because of the limited fuels for fishing boats. The fuel is expensive and it is not always available. If they cannot afford or cannot buy it, they cannot go to the sea. At the village of South Tiku, for instance, many fish processing factories exist, but the market price of fish is often unstable. The fishermen hope that the government could solve these problems.

As for economic activity fishermen generally carry out it as group, but some do individually. Most fishery activities are undertaken by men aged over 15 years old. Average income of fishermen in the Province of West Sumatra ranges between IDR 25,000 and IDR 100,000. Fishers have such low incomes because 60% of them are labor workers. Trawl fishing needs huge trawl nets and rather large fishing boats, but an average fishing net used at the local fishing communities is sized with 100-200m long. This type of net is nothing smooth with rough seams. The mesh of such net with rough seams is sized with a length of 50-60cm and a width of 10cm, but an average mesh of fishing nets is sized with a length of 25-20cm and a width of approximately 5cm. The rough seam could catch big fish such as tuna, spanish mackerels, groupers, sharks, while good nets with small meshes could catch small fish such as anchovies, skipjack tunas, red snappers, and barramundis. Each fishing boat for trawling is sized with a length of approximately 4m and a width of 1m, but local fishing communities usually uses much smaller fishing boats with outboard motors.

The catches is directly taken to the traditional markets by middlemen, and there fishery agents or buyers are waiting. Typically, these agents are owned by females. The traditional markets could accept all types of fish, which is either large or small.

Regarding infrastructure and transportation, the coastal zone in the Province of West Sumatra is traversed by country roads which connect between the capital city of Padang and the capital towns of regencies. In this coastal zone, mainly at the city of Padang, almost all governmental offices, private companies, and schools are concentrated, where all of the significant fishery activities and fishery economy are under way, with some bank offices of national banks and rural banks, including Islamic banks, being beneficial for the economic growth of local fishery. As for human resources in the Province of West Sumatra, some have fairly enough educational backgrounds and a variety of skills for fishery sectors, but these potentialities have not been untapped and underutilized yet.

### **3. General Fishing Economy at the Village of South Tiku**

The majority of fishermen at the village of South Tiku work as crews on inshore fishing boats or deck hands on offshore fishing boats. The village has 145 full-time professional fishers, which compose only 11% of the total village population, many of whom work on fishing boats for trawling. However, only 7-8 fishermen, out of 145, own their own fishing vessels and gears for trawling, who are working as skippers as well. In the village of South Tiku, according to official sources, there are about 50 people, including non-villagers of South Tiku, who owns the fishing vessels for trawling. They are known locally as owner-operators, who are sometimes local merchants. Approximately 20 middlemen are working at the village of South Tiku.

The fishing economy along the Tiku coast could be divide into 2 sectors: the traditional small-scaled inshore sector (*nelayan pantai*) and the modern large-scaled offshore sector (*nelayan pukat tunda*). These 2 sectors differ in several ways. The inshore sector is predominantly by the local Minangkabau, who has established its own base in the small market of Pasa Tiku, about 200m away from the village of South Tiku. On the other, the offshore sector receives the intensive capital investment with many labor workers, is organized and controlled by fish traders, typifying a growing capitalistic economy. The offshore sector has been developed, along with the growth of the capitalistic fishing economy at village of South Tiku. The village official figures show that most practitioners of offshore sector are newcomers, but before they came to the village of South Tiku they had already owned some offshore fishing boats. However, this story is not true. Everybody knows that these newcomers from other villages started their own offshore business at the village of South Tiku, utilizing the names of their local Minangkabau friends, who are usually fish traders, when they applied for fishing permissions.

Inshore fishers only operate small boats powered by outboard motors, using simple fishing gears such as small drift nets and handlines. Their fishing zone is limited only within 3 nautical miles from the coastline. Compared to the amount of capital invested for onshore sectors in foreign countries, the capital of inshore fishing at the village of South Tiku is small. The Inshore fishermen need for the initial capital investment between IDR 500,000 and IDR 1,000,000 only to cover the cost of a small fishing boat with a outboard motor and a set of tiny fishing net. The most recent official figures show that there 648 small boats operated by inshore fishermen in the village of South Tiku; 90 % are powered by outboard motors while the rest are without

any engines. 80% of these inshore fishermen are non-professional fishermen. Since most work alone, there is no economic organization or division of labor among them. Each small fishing boat composes an independent fishing unit (see Table 9).

**Table 9. Ownership of Boats by Categories of Owners and Types of Boats in 2017**

<b>Types of Boats</b>	<b>Owned by NP Fishers</b>	<b>Owned by Fishermen</b>	<b>Total</b>
Without Engine	10	45	55
Outboard Engines	40	34	74
Inboard Engines	353	82	435
No Information	39	45	84
<b>Total</b>	<b>442</b>	<b>206</b>	<b>648</b>

Inshore fishing production is not used solely for the domestic household consumption, but for the markets, even though it is common practice to take a small portion of the catch to home. Inshore fishers catch only low-grade fish, which is sold to local middlemen. Offshore fishing, on the other hand, brings a large volume of high-grade fish. Each of offshore fishing boat, according to official figures, lands 1,000 kg of fish on average per returning.

#### **4. The Inshore Sector or Traditional Sector**

In 2017, the traditional inshore sector at the village of South Tiku has 74 small fishing boats with outboard motors, mostly operated by Minangkabau inshore fishermen. Some of these boats are also used for free ‘public’ transportation instead of fishing or tourism, since the inshore fishing no longer secures sufficient income for some fishermen. Nevertheless, about 40% of the total licensed fishing boats at the village of South Tiku are still inshore fishing boats.

The traditional inshore fishing sector maintains some characteristic of its origin inside the peasant economy. However, this sector is not exclusively an isolated domain, for it has external economic relations. Through relations with outer markets, inshore fishers could sell all or part of their catch and purchase goods and services they cannot produce by themselves. The inshore sector is thus an integral part of the overall exchange economy existing in the village of South Tiku. However, the close consideration of the production sphere reveals that this inshore sector differs significantly from the offshore sector, which has wholly adopted the capitalist mode of production. From the viewpoint of a mode of production, the inshore industry could be said to be still a part of the Minangkabau peasant economy.

The newcomers participate neither in the operation of inshore fishing nor in the capitalization of this sector. They take part only in marketing the catch from this sector.

## **5. The Offshore Sector: The Capitalist Mode of Production**

The offshore sector at the village of South Tiku is subsumed within the capitalist mode of production and exchange through the spread of circulation capital into the traditional Minangkabau fishing economy by newcomers. They migrate to this village through their connections with their relatives or friends, and they become fishermen, middlemen, or fish dealers; some move in by using the Minangkabau migration tradition, and others do by the matrilineal residential rule.

Most newcomers are aware of the degradation of marine resources and the declining fish catch in this respect. Fishermen themselves state some different reasons for declining scores, but, according to them, the primary cause is the increased number of fishermen. The following reasons are gazetted marine ecotourism areas,

unpredictable weather patterns, annual visits of seasonal fishers from other provinces, and so on. The increased number of newcomers pressures on the limited marine resources, particularly, in the Pariaman coast. Due to their involvement in other income-generating activities, some newcomer fishermen stay at the village of South Tiku only seasonally, but migrate permanently. Most fishermen along the Tiku coast report that almost all newcomers used to do fishing activities at other fishing villages or ports when they were young; they are frequently experienced.

A newcomer leaves his home community and moves from one habitation to another in fulfillment of his occupation. He moves in search of fish, with thinking seasonal types of fish, tides, and seasons themselves (Tawari 2002:2). J. B. Rajan (2002:10-11) identifies 2 dimensions of mobility, being time and direction. Forms of spatial movement of fishermen are related to the expansion of work space, as they move out of their original communities to look for their catch. Circulation is the expansion of workspaces for a more extended period and the residences of the migrants might also be shifted for a more extended period in connection with the occupation and migration, which entails the permanent settlements where the movers settle in the destination villages with families. Both places of work and places of residence have been shifted.

Newcomers fishermen do not confine themselves to one fishing ground or even one catch landing site. The newcomers along the Tiku coast works at different landing sites at different times of the year. Once young newcomers gain experience, he could be free to become a migrant fisherman. After being older and having his own family, he would give up to move around but he could still move seasonally, usually during



the high season of fishing. The newcomers claim that fishing is not worth the effort in the low season as the catch at all at landing sites is similarly small.

In the village of South Tiku as well, the newcomers are always moving between districts; it takes them 1-2 hours to chase the schools of special fish, such as tunas, mackerels, groupers, super anchovies, seaweeds, or pearl shells by as by engine-powered boats. They also fish out to sea as far as 120 nautical miles from the coastline. Usually, they stay in the village at least for a week and at most 3 months, during the fishing seasons. Indeed, however, they sometimes keep staying at the village of South Tiku for a few years. They have always temporary accommodations, but if they live for years they often build temporary huts on the lands, which they are granted. Their wives do not accompany them when they move out of the village of South Tiku for months. If the wives do not have any jobs, such as fish processing works, they rarely follow their husbands.

Newcomers fishermen have advantages in the village of South Tiku. This community has already had a good infrastructure in terms of fishery and everyday living. Because they are thought to be beneficial for the development program of the village of South Tiku, they succeed in being integrated into the day-to-day running of the community and the local government, by forming social groups whereby they could present their demands.

## **6. Division of Fishing Labor**

At the village of South Tiku, seasonal or part-time fishing is usually characterized by higher labor and financial investment rather than everyday fishing. Traditionally, it is conducted by young and mature males, who participate in such

fishing activities as a part of a more comprehensive and multiactivitated livelihood strategies. They use relatively cheap and straightforward fishing gears such as traps, gill nets, hook lines, fences, or barriers.

This type of activity could last for a few weeks during the fishing seasons, depending on the combination of activities undertaken by the households and the availability of labor resources. The catch is usually used for the domestic consumption but it is more and more frequently sold in the local markets by way of middlemen. In Africa, along rivers or in the vicinity of water bodies such as ponds or reservoirs, the active men experience the similar type of seasonal fishing activities between harvest and planting (Thomas and Adams 1999: 919-935). In the area around Tonle Sap Lake at the Mekong Basin, millions of households share their time for seasonal fishing activities, operated on the open water of the lake and the fringing floodplains during the rainy season, when they do not work for rice and other cash crops (Ahmed et al. 2008: 598-611).

Small-scaled processing and trading activities for the local markets require relatively few investments, generally only low operational costs, explicitly no muscular physical strength, and usually no skill. These characteristics allow a large number of people, especially women, from the lowest strata of the community, who lack education, literacy and financial capital, to engage in these activities at the village of South Tiku.

At the village of South Tiku, the majority of women doing trading activities receives little or no financial supports from their husbands. In a large number of cases in developing countries, poor male fishers have limited or no access to the regular source of income. In these cases, frequently the average income of women who are

doing the trading or processing activities often exceeds that of their husbands; they always finance their husbands' expenditures, as a way to secure preferential commercial transactions with the fishermen.

## CHAPTER V

### COASTAL RESOURCES IN THE VILLAGE

#### 1. Introduction

Agam Regency (*Kabupaten Agam*) of the Province of West Sumatra lies in the western part of the island of Sumatra. Coastal area of Agam Regency faces directly the Indian Ocean. It consists of 16 districts and 82 villages (see Table 10). Its length of the coastal area is about 43km long, but it is not the longest coastal area in the Province of West Sumatra; 30,000 inhabitants or around 10% of total population of Agam Regency live at the coastal area.

**Table 10. Number of District, Wide of Region, Population in Agam Regency, the Province of West Sumatra in 2016**

District	Capital of District	Wide of Region (km <sup>2</sup> )	Village	Population
Tanjung Mutiara	Tiku V Jorong	205.73	3	30,020
Lubuk Basung	Lubuk Basung	278.40	5	72,874
Ampek Nagari	Bawan	268.69	4	25,114
Tanjung Raya	Maninjau	244.03	9	34,691
Matur	Matur	93.69	6	16,348
IV Koto	Balingka	68.72	7	23,042
Malalak	Malalak	104.49	4	8,726
Banuhampu	Sungai Buluh	28.45	7	39,830
Sungai Pua	Limo Suku	44.29	5	24,086
Ampek Angkek	Biaro	30.66	7	48,722
Canduang	Lasi	52.29	3	22,306
Baso	Baso	70.30	6	33,206
Tilatang Kamang	Pakan Kamis	56.07	3	36,217
Kamang Magek	Magek	99.60	3	20,063
Palembayan	Palembayan	349.81	6	28,422
Palupuh	Palupuh	237.08	4	13,214
Total	16	2,232.30	82	476,881

(BPS-Statistic of Agam Regency 2017:32-33)

In this coastal area, there are some islands, and a few are relatively large. The potential marine resources are quite abundant in this region; there are many types of finfish, shellfish, and other marine resources.

Out of 16 districts in Agam Regency, Tanjung Mutiara District is at the coastal area, with the coastline of 43km long, having the high biodiversity of marine and brackish water ecosystems. Tanjung Mutiara District with the area of 205.73km<sup>2</sup> lies in parallel with the shoreline at 00 01' 34"-000 28' 43"S and 990 46' 39"-1000 32' 50" E. It consists of 3 villages and 18 hamlets with the capital town of Tiku V Jorong. Tanjung Mutiara District has its border with the city of Pasaman to north, with Padang Pariaman Regency to east, with Lubuk Basung District to south, and with the Indian Ocean to west (see Figure 6).

**Figure 6. The District of Tanjung Mutiara Border**



The village of South Tiku consists of 7 hamlets, viz. Gasan Kaciak with the area of 1,141 hectares, Banda Gadang with the area of 724 hectares, Pasa Tiku with the area of 111 hectares, Pasia Tiku with the area of 100 hectares, Kampung Darek with the area of 520 hectares, Pasia Paneh with the area of 605 hectares, and Sungai Nibuang with the area of 385 hectares.

Out of these 7 hamlets, 4 hamlets are located in the coastal area, where 2,152 fishermen' households are living. The village of South Tiku has its border with the village of Tiku V Jorong to north, the village of Batang Gasan to south, with the Indian Ocean to west, and with the village of Tiku Utara to east. The village of South Tiku has its altitude ranging around 2m above sea level, with an average temperature of about 26°C -30°C and an average rainfall of 2,000mm.

The detailed use of its land is shown in Table 11. The village land is mainly used by irrigated rice fields and village compounds. Because the village of South Tiku has a relatively only coastline, we have beautiful seaviews almost from everywhere in the village.

**Table 11. Land According to Use of Land by Village**

<b>Use of Land</b>	<b>Area (ha)</b>	<b>Percentage</b>
Housings and compounds	200	35%
Irrigated rice fields	241.3	43%
Non-irrigated rice fields	124	22 %
<b>Total</b>	<b>565.3</b>	<b>100%</b>

(BPS-Statistic of Tanjung Mutiara District 2016:4)

The village of South Tiku could be reached by car for approximately 4 hours from the city of Padang. The area has a tropical climate, and the recorded maximum air temperature was 27°C and minimum was 21°C. The humidity level is 80%, while wind speed varies around 1.5-14.1 knots. The average annual precipitation is 3,356mm, with the annual average rainy days of 74 days. The highest rainfall happens in November and the lowest in June. The bathymetry of the sea along the coastline of the village of South Tiku is gradual, with slope factor of 0.40- 0.80%.

The depth of the sea varies around 2.5-500m inshore from the coastline and around 347-3,000m offshore from the coastline. The height of wave could reach to 3m at maximum, usually happening between July and December. The tidal condition in the village of South Tiku waters is influenced by one in the Indian Ocean, having low and high tides. The range of flows is 1.5-2m. The current speed on the sea just in front of the village of South Tiku is 0.04-0.19m/sec.

## **2. Population**

In the village of South Tiku, 37% out of all the households are involved with the fishery sector, while 63% with the agricultural, commercial, or governmental sectors. There are 5 main economic activities in the village, viz. agriculture, small industries, trades, tourism, and fishery. From these dominated 5 sectors, many production outputs, primarily agricultural commodities and goods from household industries, are taken to other hinterlands, including the city of Pariaman or the city of Padang.

The population of the village of South Tiku in 2016 consisted of 13,003 people, with 6,699 being male and 6,304 being female (see Table 12). The household heads

numbered 2,608 people. The detailed age composition of the population at the village of South Tiku is shown in Table 12.

**Table 12. The Composition of Population and Level Age at the Village of South Tiku in 2016.**

<b>No.</b>	<b>Composition</b>	<b>Number</b>
1	Population	
	a. Number of Male	6,699
	a. 0-15 years	2,558
	b. 16-59 years	3,675
	c. Over 60	466
	b. The Number of Women	6,304
	a. 0-15 years	2,368
	b. 16-59 years	3,475
	c. over 60 years	452
	c. Number of Households	2,608
	Total Population	13,003

(BPS-Statistic of Tanjung Mutiara District 2016:20)

The statistic data shows that the largest population at the village of South Tiku are adults at the level of the age between 20 years old to 50 years old. It is closely associated with a variety of jobs occupied by people in the village of South Tiku. To meet the needs of people living in the village of South Tiku, which are the basic needs such as clothing, food, and shelter and the secondary needs such as business or education, there are many occupations and livelihoods; in particular, a lot of merchants live there. The data on the percentage of population-based variations of livelihoods at the village of South Tiku is shown in Table 13.



**Table 13. Total Population of the Village of South Tiku According to Livelihoods**

No.	Type Livelihoods	Number	Amount (%)
1	Farmers	112	9
2	Workers	223	17
3	Fishermen	145	11
4	Home Industries	29	2
5	Merchants	406	32
6	Services	100	8
7	Civil Servants/Military	19	2
8	Others	250	19
Total		1,284	100

(BPS-Statistic of Tanjung Mutiara District 2016:18)

Table 13 shows that the major livelihoods of the population at the village of South Tiku as farmers, workers, merchants, and fishermen. Because the village of South Tiku is located on the shoreline of the Tiku coast and various measures and efforts by the figures of community stakeholders are observed there, many mosques and prayer houses, at which religious activities are conducted, as the provisions of infrastructure of worship, have been built (see Table 14).

**Table 14. Names of Mosque in the Village of South Tiku**

No	Name of Mosque	Locations
1	Masjid Raya	Pasa Tiku
2	Masjid Baitul Mukminin	Tiku Pasia
3	Masjid Baiturrahman	Gasas Kaciak
4	Masjid Nurul Huda	Banda Gadang
5	Masjid Nurul Falah	Sungai Nibung
6	Masjid Nurul Huda	Kampung Darek
7	Masjid Nurul Iman	Pasia Paneh

(BPS-Statistic of Tanjung Mutiara District 2016:10)

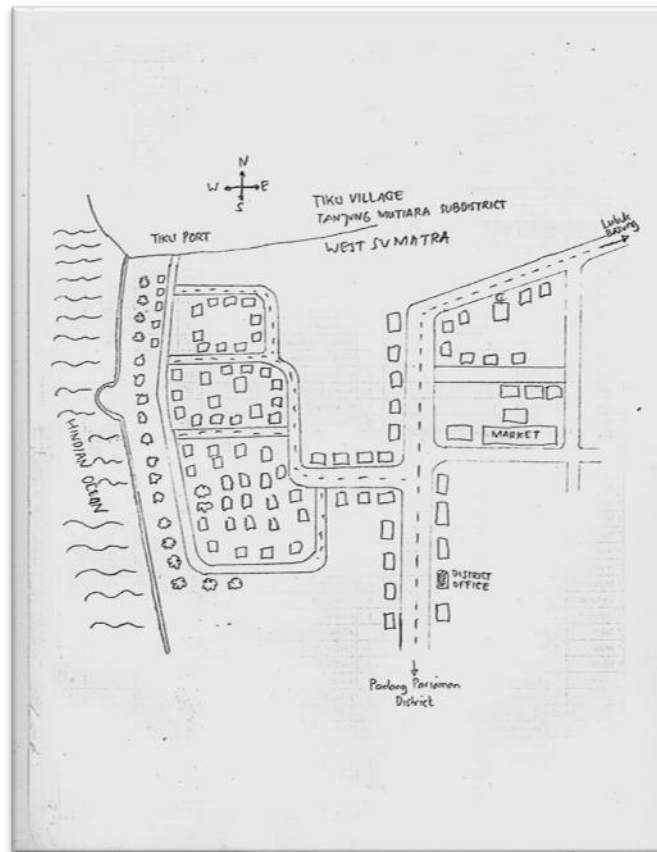
### **3. Infrastructure and Services**

The village of South Tiku has enough public infrastructure. Because of such infrastructure, villagers could access their economic activities and have job opportunities related to fishery. The services and facilities of education are available in all villages at Tanjung Mutiara District, which include kindergartens, elementary schools, junior high schools, and high schools. In addition, the services and facilities of public health are also available in all villages at this district: health posts (*poskesdes*) and integrated service posts (*posyandu*).

Normal infrastructure in this area means roads, drainages, electric facilities, and telephone networks. The existing infrastructure seems to be fairly complete, but its maintenance condition is inadequate. The road networks are not always satisfactory. In particular, the pedestrian networks inside villages between house compounds have not been surfaced with asphalt. The drainage channels are not sufficient at all. Most fishermen's houses have no drainage channels. In this area, the hygienic infrastructure is absolutely limited.

There are many educational facilities at the village of South Tiku. Even fishermen these days would like increase their knowledge until the higher level. Local community awareness of the importance of education makes most village children go at least to junior high schools or high schools. Nevertheless, not many villagers would like to receive the higher education after high schools. The Table 15 shows the data of the village level of education at the village of South Tiku.

**Figure 7. Layout of the Village of South Tiku**



**Table 15. Level of Education in the Village of South Tiku**

No.	Level of Education	Numbers	Total%
1	No School	674	10
2	Elementary School or Equal	2,776	40
3	Junior High School or Equal	1,724	25
4	High School or Equal	1,510	20
5	College or University	340	5
Total		7,024	100

(BPS-Statistic of Tanjung Mutiara District 2016:7)

According to Table 15, the level of education at the village of South Tiku is relatively high; 6,350 villagers (90%) have already graduated from elementary schools (*SD*), junior high schools (*SMP*), high schools (*SMA*), and colleges or universities. On the other hand, however, 10% of the villages have not graduated even from elementary schools. In general, these villagers have dropped out of the schools due to economic reasons. To support public educational activities at the village of South Tiku, there are many educational facilities. Table 16 shows the educational infrastructure available at the village of South Tiku.

**Table 16. Education Facilities in the Village of South Tiku**

No.	Education Facility	Numbers
1	Kindergarten ( <i>TK</i> )	9
2	Elementary School ( <i>SD</i> )	12
3	Junior High School ( <i>SMP</i> )	2
4	High School ( <i>SMA</i> )	2
5	College or University	-
Total		25

(BPS-Statistic of Tanjung Mutiara District 2016:8)

While fishermen wait for the next fishing season, they usually do not look for the alternative income sources. When they have no money, most of them try to borrow money from their relatives or family members. Some try to borrow money from merchants, of which debts they must pay back to them with their future catch. This situation makes fishermen more dependent upon middlemen or traders. The local fishermen at the village of South Tiku are not able enough to save a part of their incomes. Because of low prices of fishing products and its lower productivity, their income inflows from fishing are not enough for saving.

The most important and critical matter of fishing activities at the village of South Tiku is selling fish. Freshfish, caught by fishermen are quickly perishable and so have to be sold to the markets as soon as possible. Therefore, the fishermen start selling their catch immediately after they come back to the seaside. Usually, fishermen could sell it quickly on the beach, where middlemen or fish processors are waiting to buy their catch. In the process of selling fish, the fishermen have direct relations with middlemen or fish processors without any further intermediaries.

The Tiku coast stretches along the entire western coast of the Province of West Sumatra and includes some islands surrounded by the Tiku coast. The sea is always rough, and coastal currents are active, especially during the southwest monsoon season which blows unimpededly from the Indian Ocean. Under this oceanic condition, many kinds of fishing gears are used by fishermen. The pelagic gears catch the two-thirds of the total landings at the village of South Tiku, with hook lines (30%), purse seines (15%), and trawl-lines (12%) (see Table 17). Indo-Pacific mackerels, anchovies, and eastern little tunas constitute nearly the half of total pelagic fish catch. Boats of 10-20 gross tons with 33hp inboard engines are normally used. The peak fishing season is from September to December. Each fishing trip lasts 8-10 days. Catch per trip is on average 1,000kg, most with skipjacks (56.5%) and yellowfin tunas (16%). In 2016, 125 fishing units are using trawl-lines along the coast of the village of South Tiku.

**Table 17. Essential Gear Types, Species of Fish or Shrimp, and Prices in the Village of South Tiku**

No	Fishery	Gear Types	Species of fish or shrimp	Prices (kg)
(1)	(2)	(3)	(4)	(5)
1.	Pelagic	1. Raft Liftnet ( <i>bagan perahu</i> )	a. Spanish Mackerel ( <i>tenggiri</i> )	20,000
		2. Stationary ( <i>bagan tancap</i> )	b. Tuna Fish ( <i>ikan tuna</i> )	10,000
		3. Hook Line ( <i>pancing</i> )	c. Skipjack Tuna ( <i>cakalang</i> )	14,000
		4. Purse Seine ( <i>pukat cincin</i> )	d. Eastern Little Tuna ( <i>tongkol</i> )	10,000
		5. Trawl-Line ( <i>payang pancing tonda</i> )	e. Indo-Pacific Mackerel ( <i>kembung</i> )	13,000
		6. Drift Gill Net ( <i>jaring insang hanyut</i> )	f. Anchovies ( <i>teri</i> )	10,000
		7. Encircling Gill Net ( <i>jaring insang lingkar</i> )	g. Yellow Striped Trevally ( <i>selar</i> )	13,000
		8. Liftnet	h. Fringe Scale Sardine ( <i>tembang</i> )	14,000
		9. Scoop Net ( <i>serok</i> )	i. Oil Sardine ( <i>lemuru</i> )	14,000
2	Demersal	1. Small Trawl	a. Slipmouth ( <i>peperek</i> )	15,000
		2. Beach Seine ( <i>pukat pantai</i> )	b. Shark ( <i>cucut</i> )	25,000
		3. Set Gill Net ( <i>jaring insang tetap</i> )	c. Threadfin ( <i>bream</i> )	14,000
		4. Cast Net ( <i>jala</i> )	d. Red Snapper ( <i>kurisi/ikan merah</i> )	30,000
		5. Shrimp Gill Net ( <i>jaring klitik</i> )	e. Grouper ( <i>kerapu</i> )	30,000
		6. Danish-Seine ( <i>dogol</i> )	f. Ray ( <i>pari</i> )	25,000
		7. Longline ( <i>rawai tetap</i> )	g. Barramundi ( <i>kakap</i> )	14,000
		8. Other Traps	h. Penaeid Shrimp ( <i>udang</i> )	20,000

At the village of South Tiku, no fisherman is allowed to go to sea for fishing on Friday. On Friday, they have to concentrate upon their religious obligations at mosques. If go to the sea on Friday, those fishermen will receive social sanctions for their violations, such as being ridiculed by the whole community. When a fellow fisherman dies, on the other, they could go to the sea for fishing. However, they usually go to the mosque to attend his funeral ceremonies and mourning rituals in honor of the deceased fellow.

Normally, local or traditional small-scaled fishermen go to the sea early in the morning around 6:30 am, and then they come back to the beach around 16:00 pm. However, all depend on the catch. Fishing at night is not much done, because of fishermen's physical conditions and lack of facilities for the night fishing.

Table 18 shows the personal names having the indigenous leadership at the village of South Tiku. When villagers would like to change the situations or to introduce new services or infrastructure into the village, they have also to understand customary values prevailing in the village of South Tiku, to practice it, or sometimes to restore its enforcement. Under these circumstances, such leadership functions amongst the villagers. At the village of South Tiku, however, traditional leaders or clan representatives are not fishermen's representatives.

**Table 18. Personal Names of Indigenous Leadership in the Village of South Tiku**

No	Personal Name	Title	Clan
1	Ir.Armansyah	Dt. Rajo Dilia	Mandailings
2	Pili	Dt. Kaciak Rangkayo	Caniago
3	Zainul	Dt. Talauk	Tanjung
4	Bustari	Dt. Panghulu Judge	Piliang
5	Amrizal	Dt. St. Palindih	Sikumbang
6	Agusman	Dt. Rangkayo Bases	Jambak
7	Irdian	Dt. St. Tumangguang	Koto
8	Blue Erman	Dt. BandaroKayo	Tanjung
9	Agusmardi	Dt. Endah Marajo	Tanjung
10	Andi Wahab	Dt. MajoKayo	Tanjung
11	Nendek (ALM )	Dt. Sirajo	Tanjung
12	Kh.Nasirmon	Dt. MajoLelo.	Jambak
13	Syaiful Anwar	Dt. Mangkuto	Jambak
14	Nuzirwan	Dt. Bgd	Mandailings
15	Suhadak Hakim	Dt. Bgd.Rajo	Mandailings
16	Tamar	Dt. Majo Basa	Piliang
17	Mansur	Pamuncak Gasan	Caniago
18	Mukhlis	Basa Mara	Jambak
19	SaniM.Abri	Pnk. Majo Lelo	Jambak
20	Roni	Pnk. St. Palindih	Sikumbang
21	Oyon	Pnk. Rangkayo Kaciak	Caniago
22	Aguslim	Pnk. Tumangguang	Koto
23	Burmadi	Pnk.Dt.Mahamangkuto	Jambak
24	Makmur	Pnk. Dt. Majo Kayo	Tanjung
25	Mashuri	Pnk. Dt. Majo Kayo	Tanjung
26	Afrizal	Pnk. Dt. Bases Majo	Piliang
27	Ismardi	Pnk. Dt. Endah Marajo	Tanjung
28	Wir	Pnk. Dt. Talauk Api	Tanjung
29	Basril	Pnk. Dt. Sirajo	Tanjung

#### 4. Occupation Structure in Area

Only 30% of potential marine resources have been explored at the village of South Tiku by local people having their own economic powers. It means that the fishery resources in the coastal area have not yet become the primary source of incomes for the welfare of fishermen, generally (Tan 2014:197). Moreover, the low



productivity and the irregular production activities make ‘cash flows’ conditions of fishermen unsecured and unstable.

**Table 19. Number of Families and Average of Withdrawal per Month**

<b>No.</b>	<b>Name of Informant</b>	<b>Number of Families</b>	<b>Total Income/Month</b>	<b>Average of Withdrawal</b>	<b>Saving</b>
1	Rusli	5	1,817,000	1,545,000	272,000
2	Limran	4	2,500,000	1,370,000	1,121,000
3	Mufriadi	7	2,561,000	1,975,500	585,500
4	Syafri	4	3,500,000	2,000,000	1,500,000
5	Adi	4	1,846,000	1,345,000	501,000
6	Zukifli	6	2,365,000	1,722,000	643,000
7	Rijal	3	2,620,000	1,185,000	1,435,000
8	Yulianto	5	2,768,000	1,511,000	1,257,000
9	Darman	3	1,933,000	1,250,000	683,000
10	Husin	3	2,372,000	1,195,000	1,177,000
11	Syamsudin	6	2,364,000	1,705,000	659,000
12	Erman	5	3,800,000	2,500,000	1,300,000
13	Syafrial	8	2,440,000	1,995,000	447,000
14	Amril	4	1,770,000	1,411,000	359,000
15	Dion	6	2,371,000	1,693,000	678,000
16	Erik	8	2,155,000	2,020,000	135,000
17	Surya	7	2,251,000	1,921,000	330,000
18	Deni	5	2,564,000	1,491,000	1,072,000
19	Nasrudin	5	2,232,000	1,511,000	721,000
20	Syamsuar	3	2,185,000	1,320,000	865,000
21	Sufirman	4	2,054,000	1,371,000	683,000
22	Irawan	7	2,224,000	2,085,000	139,000
23	Martin	4	2,100,000	1,365,000	735,000
24	Defrian	3	1,687,000	1,185,000	502,000
25	Burhan	6	1,954,000	1,540,000	414,000
26	Eri	4	2,296,000	1,325,000	970,500
27	Jonuar	7	2,325,000	1,875,000	450,000
28	Jamal	3	1,751,000	1,210,000	541,000
29	Saiful	7	3,000,000	1,891,000	1,031,000
30	Gasmin	6	2,655,000	1,750,000	905,000

In the village of South Tiku there are 5 categories of fishermen. First of all, fishpond businessmen could be considered as the upper medium-scaled fishermen; they are the owners of the fish farms for exporting fish. This class of fishing is well

advanced in terms of its business organization or management system. It produce relatively large quantities of fish, employing 5-15 workers. It knows the extensive export-oriented distribution marketing, which is legally entitled in the form of a limited company (*PT*). However, the number of these entrepreneurs is still small at the village of South Tiku. From the eyes of financial institutions, these fishpond businessmen are categorized as 'bankable business'. Usually they do not live in Agam Regency, and even not in the Province of West Sumatra. If necessary, they sometimes open the representative offices in the city of Padang. The headquarters are at the capital city of Jakarta or at big towns in foreign countries.

Secondly, fishermen as skipper of fishing boats are important, but their business organizations have not yet well structured and they have not legally been acknowledged. The legal form of such business organizations is only a proprietorship business which is owned by one person. Although certain banks and other financial institutions dare to give loans to them, but their amounts are limited up to IDR 50-200 million, for buying or building a motorboat and for the initial expenses of opening business. These fishermen are still categorized as small-scaled entrepreneurs, because on average each has only one motorboat operated by 3-5 workers. The marketing networks depend only on the local or regional markets. When going to the sea for fishing, each skipper employs 3-5 people workers or crews, and prepares everything required for the fishing operation. For 10-15 days' fishing at sea, he needs ice stones for preserving fish, fuels for the engines, or provisions for worker crews.

Thirdly, fishermen as fish catchers, comprise the biggest in number in the village of South Tiku. Most have their own fishing boats and gears. Their fishing boats are sometimes with outboard motors, but sometimes without them. They often

go to the sea for fishing by themselves alone. Usually they do not go too far offshore, because their fishing boats have the simple structure only. Their fishing at sea could normally maintain their daily living only; it is difficult for them to save up or to support their family members financially. These fishers normally have the minimum educational backgrounds and training experiences.

Fourthly, fishermen as middlemen have their own small capital, it always comes from their family members. Their economic powers are relatively weak. They run their business by themselves alone and sometimes it is assisted by their wives or children. However, most of this type of fishers have not married yet. They do not have any special places for selling fish at the markets, sometimes only with a few separate stalls for storing their bought fish. They usually buy the catch directly from fish catchers upon their landings on the beach, then take their bought fish immediately to the local markets by motorcycles. Most of them are villagers at the village of South Tiku.

Finally, fishermen as workers compose the large group living in the village of South Tiku. They usually do not have any alternative jobs except for going to the sea for fishing; they use their physical strength and sell their services physically in order to obtain the limited incomes. In general, their educational backgrounds are extremely scarce. All of them are still relatively young in terms of age, averaging under 40 years old. After the fishing season finishes, they become unemployed; to sustain their family life, they are enforced to borrow money from skippers or from relatives or family members. They are often entangled in debts.

As discussed by E. H. Allison and F. Ellis (2001:377-388), the occupation which aims at the improvement of livelihood, should not focus on increasing

productivity, but on the diversification of livelihood in other sectors for its security and environmental sustainability. The diversification of livelihood has been one strategy for fishing families in the village of South Tikou to survive and to improve incomes. S. Singleton (2000:18) highlights that the diversification of livelihood could give the employment opportunities in villages as well as the less migration opportunities. Diversified livelihoods could also contribute to lower the fishing efforts through the reduction of time for fishing (Sievanen et al. 2005: 300-305; Crawford 2002: 45-57).

This effort does not mean to eliminate the fishing efforts, considering the cultural and social aspects which are attached by fishing families (Acheson 1981:277; Pollnac et al. 2001:531-544), but it expects that their fishing efforts would be reduced. The diversification of livelihood depends on the willingness of fishermen to move to other livelihoods (Peterson and Stead 2011:1-11). R. N. Mualil and others (2011:74-81) find that fishers are motivated to exit from fishery activities when the suitable alternative sources of income are offered. Some viable opportunities for the Tikou coast might be in the area of marine cultures such as cultivating seaweeds, or of tourism. However, any identification of possibilities must be conducted with best practices to identify whether the supplementary livelihoods could relieve the pressure on current marine resources as well as the assessment of positive and negative impacts or not (Stacey et al. 2012:63-75).

The principle for introducing complementary livelihoods is that the launching production will be likely to be successful; the demanding products are known by buyers. For the success of marine culture activities, an intensive technical tutorial system is really necessary. This activity needs some knowledge and new skills how to feed and to care fish in ponds. As discussed by N. Ahmed and others (2008:598-611),

the institutional and organizational support, the training facilities, and the extension services help to prevent or to cope with crisis situations to order to reduce risks in this new activity.

The marine tourism industry is considered to be a non-extractive use of marine resources (Townsend 2003:144-145; Groot and Bush 2010:1055-1056). Marine tourism could generate extra incomes for villagers and for marine protected areas (Buckley 2004:22; Conservation International 2008:55-61; Peters and Hawkin 2009: 222-223; Wielgus et al. 2010:39-43). One way to ensure the communities experience, the benefits are to develop pro-poor tourism (Shen et al. 2008:27), and they involve the local community in the chain of the industry. A. Diedriech and E. Garcia-Buades (2009:515-516) suggest that the local perceptions as indicators should be used to measure tangible impacts of tourism on the community. This new industry allows coastal villagers to feel the benefits from the tourism program, supported by them.

The newcomer groups have the tremendous impacts on local marine resource conservation along the west coast of the Province of West Sumatra. The number of newcomers has been increased in various coastal places continuously, because of the Minangkabau migration tradition and the matrilineal residential rule. Kato (1982:56) says that migration is the movement of a collection of people from one region to another to improve people's lives and their economy. Migration is the process of moving from one place to another in order to live or to work (Bungo et al. 2011:122-123; Kahn 1976:77; Maher 1994:55). The movements sometimes happen from one city to another city or town.

At the village of South Tiku, a number of newcomers have continued to be proliferated over the past 20 years; in 2016, 30-50 fishermen moved in. Those

newcomers came to the Pariaman coast from a variety of outer districts, but some local people also migrate to other provinces in Indonesia (Zamzami 2015:36). Since 20 years ago, the Tiku coast has been multicultural. Many people in the city of Pariaman are original settlers plus newcomer fishermen from Pesisir Selatan, Agam, or Pasaman Regencies or from the city of Padang. The distribution of Tiku coast population distribution shows how people are spread out across the coastal zones. Every spread pattern is different; some newcomers move into the sparsely populated zones, and others do into the densely populated places.

## **5. Occupational Problems**

The main occupational problems in the village of South Tiku originates from the villagers' way of thinking. The thinking pattern of fishermen still depend on their habits at daily life, their subsistence economy, and their traditional way of thinking. It means that they are not yet able to work toward the modern economic orientation. They are still weak, regarding ability, expertise, and skills in the field of business.

Therefore, the program policies need to change the 'mindset' to stimulate fishermen for becoming those who could work in the manner of modern way of thinking. Manufacturing is not always associated with the connotation of advanced technology, but more straightforward understanding is necessary: the industrialization is a process to transform the input factors to the output factor, so that it will have high added value either in term of intermediary products or end products and accepted by the market. Only by an industrial process, the fishing productivity could be increased by adding value as much as possible. Because of his talent, thus, an industrialist who likes to diligently try, does the transformation or processing activities. It could also be

an industrialist born as the result of a process of experience, education, training, coaching, guidance, and mentoring, which are regularly conducted systematically and sustainably by certain professional institutions.

Production skill of fishermen could be considered still being traditional, with less additional values and benefits. They used not to work in the manner of the professional management system by using advanced technological products and technological information systems. That way how they still produce the product mostly in the form freshfish could result one with low additional values, even if there are processing activities only to the extent of the finished goods. Conditions of the production process are also not so clean, because it is performed under the sterile environment, and moreover fishermen do not give much attention to the quality control of their products. When they do the overfishing, in particular during the fishing seasons, the price of fish drops drastically which is detrimental to them. Therefore, it is a high time to improve and develop fishermen's skills and their technical knowledge to change their patterns of production that solely produce raw materials or freshfish to the patterns that produce processing products with high additional values. Introducing the mode of production in the style of agricultural industry or agricultural business could be helpful.

As for other problems, the quality of fishermen's human resources is low because of their education backgrounds; most of them have graduated only from elementary schools. Their low productivity is due to lack of the management system. In this term, even at Tanjung Mutiara District, foreign countries sometimes take advantage of value added fish: illegal fishing vessels from foreign countries come to

catch fish inside its territorial water, and, in addition, they frequently buy fish directly from local fishermen at sea; indeed, they sell it more expensive at their home countries.

These conditions have resulted in the social inequalities among villagers. The quality of life among fishing communities is deteriorating. The similar situation could be observed in some places in the highland regions at the Province of West Sumatra, such as at the cities of Padang Panjang, Bukittinggi, or Sawahlunto, or at Tanah Datar Regency. If these problems are not solved appropriately by local and central governments, the growing number of people would leave the coastal area and migrate into urban areas; rural zones and coastal regions will become increasingly left behind and they will not be attractive for people with good educational backgrounds. In the long run, the economic success of local fishermen communities leads to the economic welfare of the Province of West Sumatra as well as the financial stability of Indonesia.

There are 2 factors concerning the primary cause of poverty among fishermen's communities along the Tiku coast: socio-economic factor and techno-economic factor. 5 socio-economic problems exist in the village of South Tiku. First of all, the inequality in the sharing system exist in the village of South Tiku: the differences in socio-economic status of fishermen cause the income disparities among fishermen. Workers tend to borrow money in advance from their skippers before going to the sea. These loans are used for their families' living while they work at sea. After returning from the fishing operation, the catch is divided between fishermen by the skipper. The distribution pattern follows the way all the catch is counted in the local currency, deducted the operating costs, and the rest divided in the two-third for all workers and the one-third for the owner of the fishing vessel, who is sometimes the skipper. If the



catch is not sufficient enough to cover the operation costs, however, workers, in particular, have to cover the shortfall and to incur additional debts for the owner.

Secondly, traditional catchers at the village of South Tiku have only inadequate incomes, with the limited working capitals and the lack of modern facilities. Their production equipment is still straightforward, with lower technology and less productive. Consequently, their amount of catch is always scarce. Their income level is extremely low, being around IDR 25,000-50,000 per month. Most fishermen in this social category admit that their income from their fishing operations is only enough to meet their minimum daily life. Weather conditions are also significant problems for them who are using traditional fishing boats. They cannot go to the sea if the weather is bad; on average for 5 days per month but sometimes even up to 15 days per month they have to idle away at home, owing to poor weather conditions such as large waves, heavy winds, high waters, or storms. Because of this kind of uncertainty, it is difficult for them to calculate both their family cash flows and daily expenditures correctly.

Thirdly, almost all fishermen at the village of South Tiku face the limited capitals and the limited accesses to capital sources: this fact makes them difficult to have modern fishing boats and gears which are much better and more productive for offshore fishing. To purchase them, relatively larger capital is needed. The catchers use traditional fishing boats; if they had larger fishing vessels with engines, they could catch fish not only in inshore waters but also in offshore waters. In actual practice, however, they usually cannot borrow any money for the capital from any financial institutions, in particular, from banks, as they have no collaterals. Frequently, in addition, they do not want to do the modern fishing operations, either.

Fourthly, all fishermen at the village of South Tiku lack the appropriate training model and guidance: the training and guidance programs, conducted by the local government, in fact, have not been evenly distributed well to all fishermen's groups as well as to all independent fishermen. Often the training and guidance programs are available in the area where some business groups of fishermen have already advanced in terms of the experience of fishing activities, while in the area where no such business groups or local companies exist, no training and guidance program exist, either. On the other, the training models and technical advices provided by the government are not frequently relevant to the fishermen's needs and their requirements. In addition, these programs, each of which is performed separately by different governmental bodies, are occasionally overlapped, although each program is officially independent with different objectives. Because of the shortage of local governmental budget, it cannot hold these training and guidance programs so often for local fishermen.

In the village of South Tiku, finally, the limited public assistance programs by the local and central governments are awarded to some fishermen, but they are partial to the some fishermen only. For example, the fishermen who own their own large fishing vessels, often could receive such public assistance programs. In the village, however, many have only some fishing gears and small fishing boats, or some occasionally do not have both. Such fishermen rarely receive the public assistance programs from the government. Frequently, in this case as well, relatively many assistance programs are less relevant to the fishermen's needs and expectations. Therefore, many fishermen have never received anything from such programs. In

addition, these programs are not enough for covering the purchase of larger fishing vessels and the fishing operational costs.

There are 6 techno-economic problems which cause the poverty of fishermen exist in the village of South Tiku:

1. There is no local government regulation and policy, which encourages the local government to set the coastal region along the Tiku coast as special fishing strategic zone for piloting the development of fishery economy. The provincial government is still reluctant to undertake the groundbreaking policy programs. Local policymakers are not ready to confront the risks which the fishermen's communities face currently.
2. There are no logistic instrument and accommodation facility for businessmen and industrial incubators who need them as the base the for local economic resources development.
3. The lack of innovative spirit and creativity is observed among fishermen, because no institution, which acts as stimulator, dynamization agent, or innovator for fishing communities in the region, exist.
4. Local business groups or local companies do not know anything about the development of productive technology, because the communication between local governmental institutions and universities or other research institutions is less effective. Therefore, it is difficult for fishery businessmen to enter the market of productive technology, which often comes from foreign countries.
5. There is no development of aquaculture products, due to the unavailability of institutional service centers, training cores, or coaching and mentoring systems, which work mainly for the fishermen and its sustainable development.

6. There are not many sources, such as local banks. The local authority should initiate the establishment of local venture capital companies or affordable financial institutions.

Even local fishermen, who are very dependent on fishing for their income, tend to look for other jobs in order to receive better revenues, if their income levels are too low. In the town of Bantique, the Philippines, the fishing has a healthy working relationship, which overcomes the difficulties in marketing the catch of the fishermen with the limited capitals, but they are always disadvantaged for prices and services specified by the fishermen (Acheson 1981:355). As for employment contracts, there is a competition among the owners of fishing vessels for recruiting new workers. These days, they tend to need more workforces for their fishing operations; workers have more options for joining fishing vessels with better incomes and chances.

## **6. Fishing Gears**

At the village of South Tiku, the main properties in the fishing community are fishing boats and gears. The most important gears in the Province of West Sumatra are trawl-lines, gillnets, seine nets, and purse seines. There is no pole-line operation in this area, but the trial operation once happened in the 1970s without any follow-ups. The tuna fishery in western Indonesia is mainly on small-scaled operations. Other than in the Province of West Sumatra, trawl-lines are used frequently around Bali, gill nets around Java, seine nets in southern Java, and purse seines for small pelagic fish in eastern Java and ones for skipjacks around the city of Banda Aceh. The fishing gear of purse seine for pelagic fish has recently been developed in the Province of West Sumatra, where the total 15 purse seiners are operating now. The fishing vessels for trawling which are working in the Province of West Sumatra are between 4.43 and

28.89 gross tons, with 16-55hp inboard engines. However, more than 80% of these boats have 33hp engines; each is 10-20 gross tons with 8-12 trawl-lines worked by 4-5 fishermen.

The fishing ground for trawling is mainly in western waters of the Mentawai Islands. Each trip ranges 4-15 days, but on average 8 days. Each boat carries 2.5-3 tons of ice per trip for preserving fish (Zamzami 2015:35). Recently, however, fishermen start using smaller fishing boats (*kapal unyil*) with 8-12hp engines, but most of them with 12hp engines. In one operation trip, 3 fishermen use 8 trawl-lines for 3-7 days, but on average 6 days at sea. The fishing grounds are the same as those for larger fishing boats. The fishery by small purse seine nets has also been developed recently, in particular, at the city of Padang, but it is mainly for catching small pelagic fish and small tunas. The Sumatra Fisheries Development Project at the city of Padang has started to be operated by some purse seiners with multi-purposed fishing boats (Zamzami 2015:35-36).

The unusual night fishing units using driftnets at the village of South Tiku show us the highest performance, by far better than the daytime driftnet units. This fact suggests that there is more room for the catch expansion and for the optimal resource allocation in the driftnet fishery in the village of South Tiku, by being adopted the high technology by experienced fishermen. As for the driftnet fishery, its catch has been increased with its technological improvement, and resulted raising the standards of living of driftnet fishermen. Since the night fishery is operated near shore, it does not need the additional fishing efforts, it does supply the increasing catch to fisherman, and eventually it does improve the fishermen's earnings.

## **7. Marine Conservation Area**

The marine conservation is of global concern today and it is a strategic issue for several countries, including Indonesia. With an abundant potential fish resources, Indonesia has to be able to manage these resources effectively and sustainably for people's welfare. The official management of fish resources in Indonesia initiated in 1990 with the passing of the Act No. 5/1990 on the conservation of biological resources and their ecosystems. However, a more specific legal umbrella for the conservation of fish resources did not come before 2004, when the Act No. 31/2004 on fishery passed, and subsequently it was amended by the Act No. 45/2009. Further, the fish resource conservation is mandated and outlined in the Government Regulation No. 60/2007, which was followed by other technical regulations in the form of guidelines and ministerial regulations. Since the establishment of these legal umbrellas, the conservation of fish resources in Indonesia has started to be intensified.

The national and local governments created no less than 15.78 million hectares of marine conservation areas before the end of 2012. The Indonesian government would like to commit to increase the expansion of marine conservation area to 20 million hectares by 2020. This commitment is in keeping with that to make the management of these areas more effective. In accordance with the program by the Ministry of Marine Affairs and Fisheries, the effective management of conservation area is aiming at generating social-economic and cultural benefits for people and the sustainability of resources.

Furthermore, conservation areas could also be developed in order to embrace the principles of the blue economy, such as poverty eradication, social inclusiveness, and resources sustainability. The conservation is a challenging and necessary part of

the effort to balance the economic needs of the community and the wish to conserve existing resources for the future. In July 2012, marine conservation areas in Indonesia covered the total of 15.78 million hectares. The marine conservation area has an essential role in supporting sustainable fishery management. Due to the strong government political will in the sustainable management of marine resources and fishery, additional 10 million hectares of conservation areas had been finished to be demarcated by the end of 2009, one year earlier than the planned year. Up to now, the total of additional marine conservation area has surpassed over the target, reaching 13.5 million hectares.

The sustainability for a conservation area, with added values for the local community based economic activities, needs to the capacity of human resources in managing natural resources, including water, according to rules. Besides the quality of necessary facilities, infrastructure, and supporting activities, the marine conservation needs to be enhanced both on land and in the sea. Then, the strong partnership between fishermen communities, the governments, private sectors and groups, and other institutions are required to manage the conservation proportionally. To strengthen the role of the community institutions in the management of marine conservation area as a form of appreciation for the joint effort to preserve the environment optimizes the protection and the cultural preservation of conservation area, including the local wisdom as one of the instruments of conservation.

Although these initiatives are essential tools to address conservation problems, many of these indications are performing poorly, particularly in the Province of West Sumatra. The main reason for the poor performance is the lack of knowledge about behavioral dynamics of rural households. In the Province of West Sumatra, however,

the main problem remains in the lack of knowledge of socio-economic dimensions about household characteristics, such as the asset endowment, the demographic structure, the market condition, the service, and the infrastructure of local communities living along the coast. Limitations imposed by environmental market variability could also be influenced the way how each household exploits its available natural resources. In other words, each rural coastal household develops and implements its resource use strategy and tactic in response to the constraints, which it encounters; its intended objective is given in the particular human, social, cultural and economic context.

In this context, the environmental degradations and poverty are recognized as significant and urgent issues. An explicit connection between them is made through the ‘downward spiral’ of the ‘environment-poverty nexus’, where poverty is seen as a cause of fish stock exploitation and fish stock depletion, which are contributing to deeper poverty. One of the implications for the adoption of this environment-poverty nexus is the widely accepted perception which the economic development and poverty reduction strategy should help improve the conditions of fishery resource and vice versa; the sustainable use of fishery resources could be an important vehicle for poverty reduction. During the World Fish Congress held in May 2004, for instance, it was claimed that the conservation of the world's oceans could only be achieved if more significant problems of poverty, hunger, and underdevelopment were adequately addressed. Implementing stronger conservation measures and more sustainable fishing practices hinges on addressing the causes of poverty and food insecurity (Conservation International 2008:7).

The marine resource conservation as tool is used to conserve the biological diversity and the productivity of marine resources, but the efforts to organize marine



resources spatially have created the conflicts related to marine resources. The incorporation of social and economic issues on the criteria for the establishment of marine resource conservation is critical (Balgos 2005:987; Christie 2004:155; Dietz and Adger 2003:23; Hockings et al. 2000:11; Kelleher 1999:33-35; Klein et al. 2008:334). It is not so sensitive in terms of local impacts, and it might result in considerably adverse social and economic changes (Chapin 2004:25; West et al. 2006:258). Thus, the challenge is to incorporate the socio-economic considerations which enable the resource users to engage entirely in such a way effectively which leads to equal collaboration and ownership among resource users (Pollnac and Pomeroy 2005:235).

The establishment of marine resource conservation involves some complex choices. Marine resources have a wide range of values (Harmon and Putney 2003:55-60; Kelleher et al. 1999:33), which are derived from multiple stakeholder groups having different interests (Pollnac and Crawford 2000:17). Ecological values such as biodiversity and resource sustainability are in the long term advocated above all by global environmental movements (Toropova et al. 2010:96), which often competes with the shorter termed social and economic values and needs of local people. There is always a question of whose values and interests should be prioritized in which time frames.

Globally, there has been a gradual change in thinking on the purpose of marine resource conservation. These days, the marine resource conservation is not only considered as a tool for conservation, but also as a way to improve the livelihoods of local fishermen (Chapin 2004:18; Christie 2004:166; Klein et al. 2008:334-336; West et al. 2006:257). Ignoring these dimensions might fail in the management, as a global

conservation network recognizes these interests by traditional local people who are parts of the decision-making processes of protected areas at all levels (Balgos 2005:987; Christie 2004:155; Dietz and Adger 2003:23-26; Hockings et al. 2000:11; Kelleher et al. 1999:33; Klein et al. 2008:337).

The local fishermen use marine resources as their sources of livelihood. Thus, those who suffer most from restrictions will mainly be them. The planning bodies should recognize that they are the primary stakeholders (Pomeroy and Douvere 2008:235-236), and to recognize their cases, which depend upon territorial interests in zonation, is essential. All local fishermen have different characteristics and activities within a village. Some are workers and others are middlemen. In addition, these actors in fishing and related activities are sometimes women.

Women participate in fishing activities in several ways at the village of South Tiku. They collect tiny finfish and shellfish or engage in processing and trading fish. Therefore, women should be recognized as one of the key stakeholders. The incorporation of the female knowledge is one of the successful factors to manage marine resources in the Solomon Islands (Hockings et al. 2000:11-12; Kelleher 1999:33-34). With this perspective, the planning bodies of marine resource conservation should consider local fishers to be both men and women. Middlemen and traders are also the main actors, whose interests should be considered at first. Apart from these stakeholders, we need to see broader stakeholder groups and the differentiation among stakeholder categories. To understand the driving forces of problems related to marine resources is helpful, to find the better approaches for looking for the cause of the problems. The analysis on stakeholders is critical

for the establishment of marine resource conservation. To identify whose interests are principal in a group of people is necessary, though.

## **8. Impact of the Marine Conservation Area Management**

The Indonesian Management Effectiveness of Aquatic, Coasts and Small Islands Conservation Areas (E-KKP3K) shows us some tools or methods for evaluating the management of marine conservation areas in Indonesia. This indicates the different levels or degrees, to which the management of a conservation area has a positive impact on its bio-physical resources and on its socio-economic or cultural aspects of the local community; it contributes to improve the management performance.

According to E-KKP3K, all management activities are carried out in Indonesia, with their socio-economic and cultural targets. The achievement or outcome is a logical consequence of the active management activity. Some tools of E-KKP3K could be used to evaluate the management effectiveness at conservation areas, including aquatic, coastal, and small islands' conservation areas in Indonesia. At the macro level, the tools of E-KKP3K are used by the Ministry of Marine Affairs and Fisheries, which has a spatial view of the overall management effectiveness of all marine conservation areas in Indonesia, while, at the micro level, these tools are used to self-evaluate the effectiveness of the management of a particular aquatic conservation area and to make plans to improve its management performance.

The concept of technical guidelines in E-KKP3K is based on some academic references written by marine specialists (Kelleher 1999; Hockings et al. 2000; Dietz and Adger 2003; Christie 2004; Balgos 2005; Klein et al. 2008), in which the

evaluation of management effectiveness is seen as a way of evaluating one or several activities related to the management cycle of a conservation area, such as an overall evaluation of the inputs, processes, outputs, outcomes, and impacts. All stages of these technical guidelines are also found in the regulation from the Minister of Marine Affairs and Fisheries, No. 02/MEN/2009. It concerns the procedure for establishing marine conservation areas, the new regulation of No. 30/MEN/2010 concerns the marine conservation area management and zoning, and the additional regulation No. PER.17/MEN/2008 concerns the conservation areas of coasts and small islands. In these regulations, generally speaking, 6 stages of useful management of conservation areas are discriminated: the conservation area is initiated, the conservation area is established, the conservation area is managed minimally, the conservation area is managed optimally, the conservation area is managed effectively, and the conservation area is fully functioned self-reliantly.

These combinations explain why there is little difference at the levels of management between the proposed evaluations of the performance of each component in the management cycle. Although in principle the theoretical framework used by M. Hockings and others (2000) seems to make it much easier to evaluate the progress towards the effective management. This sequence is roughly the similar to the actual management cycle. According to Hockings and others (2000:12-16), the management effectiveness could equate with the outcomes of management intervention, which means that a conservation area would be deemed not to be useful the long processes with limited inputs, processes, and outputs. In the management of conservation areas, 3 interconnected principal aspects must be considered, viz. the local socio-economic aspect, the cultural aspect, and the management aspect itself.

The tools of E-KKP3K have realized that local socio-economic and cultural aspects are functioned as ones for management. Thus, the management initiatives and their effectiveness are preconditions for achieving the outcomes and the impacts on natural resources as well as on socio-economic and cultural aspects of the local community. For example, to enforce the rules of a conservation area on the local community is also a kind of a management activity, the effectiveness of which is indicated by the improvement of the condition of the area resources; the reduced pressure on these resources might result in the positive support for the management. Furthermore, the positive interconnection and verification between the area resources and socio-economic and cultural aspects could sometimes become a further indicator of the management effectiveness of conservation areas.

The management of marine resource conservation typically involves multi-stakeholder groups with various interests and power relations (Agrawal and Gibson 1999:632-633; Pollnac and Crawford 2000:20). With these different purposes and concerns, the management bodies always face their uncertainty and their complex problems. Therefore, the planning bodies need to create an adaptable management system, which should be alert to the impacts of such interventions (Balgos 2005:987; Christie 2004:115; Dietz and Adger 2003:26). As well the planning bodies need to consider the local problems and to use diversified approaches to achieve conservation goals and to improve the benefits for local communities (Hockings et al. 2000:16). These management strategies recognize that the complete knowledge of ecosystems is extremely complicated and the effects of human actions and natural perturbations on ecosystems are sometimes unpredictable (Hockings et al. 2000:16-18).

The members of the community who accept the marine management are usually flexible toward changes to meet the community needs and to meet the resource conservation goals (Cinner and Aswani 2005:149-152). From these experiences, the management system needs to be responsive to local problems and to learn from the interactions among local fishermen. The adaptable management also recognizes the combination of several approaches in the marine resources management. The spatial regulation, such as zoning system, must be accepted by another fishery management tool for the efforts to increase the livelihood outcomes. Generally, an optimal management approach includes a variety of measures, including spatial protected areas and temporal and fishing gear controls. These measures could achieve the conservation goal with large impacts on fishermen.

Even though there are some restrictions concerning fishing and collecting practices at 4 hamlets in the village of South Tiku, the sustainability of fish stocks is a big issue. The fishery management tools in this area try to regulate the unsustainable fishing; the regulations prescribes how long fishermen should work for fishing, which gears should be used, or what sizes of fish and other organisms could be captured. Such regulations are successful in some parts of the world. Along the Tiku coast, alternatively, it is essential to demarcate fishing restricted zones for the marine resource conservation, which should be small areas for practical success. Along the Tiku coast, local regulations as well as national laws concerning mesh sizes, hook sizes, or fishing vessel sizes, help for prohibiting destructive fishing, coral breaking, or catching juvenile fish, which could grow and yield more productive stock.

The Tiku coast has a part of the marine conservation area, designated by the Act No. 520/2012. In this area, there are 2 small islands, viz. Tangah Island and Ujung

Island, which will be strategic points for its management in the near future, because the potential marine resources are quite abundant with various species of finfish and shellfish.

Along the Tiku coast, the conservation approach for protecting the marine resource are based on the quantitative analysis of geographical conditions, ecological conditions, in particular ecological conditions of coral reefs and sea turtles, and human behavioral conditions for the use of sea, the human impact on coral reefs, or the opinions of the local community. The permanent zoning of conservation area aims to protect the coral reefs, which have the high values for biodiversity and the high conservation possibility for the habitation of leatherback turtles (*penyu belimbing*). The waters around the Tiku coast have a vast area of coral reefs to be perfect for pleasure diving locations. The beautiful sandy beaches as well as the lagoons with coral reefs along the coastal area are good for the marine tourism development.

## **9. Empowerment Activities for the Fishermen's Households**

Fishing, by its very nature, is a collective activity. Although fishermen could exploit the natural resource individually, the grouping intentions or the possible conflicts between independent fishermen soon result in the need for coordinating and organizing the collective fishing activities. The limited natural resources further reinforces this need for the coordination, which is initially related to the technological aspect of fishing gears. The collective decisions are frequently requested to control and to reduce this fishing effort for the long-termed sustainability of the resource; fishing activities, which depend upon it, are to be maintained. This necessity for coordination and collection decisions and actions represents both a challenge and an

opportunity. Most of the academic works upon fishermen has heavily focused on the challenge aspect, either to highlight its negative impact on the resource and on the local communities (Hardin 1968:1244) or, on the other, to demonstrate the capacity of these communities to address and overcome this challenge levels (Balgos 2005:987; Christie 2004:155; Dietz and Adger 2003:23-26; Hockings et al. 2000:11; Kelleher et al. 1999:33; Klein et al. 2008:337).

More recent works have attempted to integrate both perspectives in a more comprehensive way (Balgos 2005:987; Klein et al. 2008:337-338), which recognizes both positive and negative potential outcomes. However, what is much more rarely emphasized in these works is the political empowerment dimension of these collective actions. The empowerment signifies the means by which the entitlements to access to resources are maintained and defended.

R. Chambers (1983:72) stresses that poor fishermen, especially in rural areas, usually belong to the lowest socio-political organization, and that their capacities to make their voices louder is consequently weak, resulting in the exclusion from political and decision-making processes. In these conditions, the necessity for coordinations and for collective decisions within the fishing sector represent significant potentials for the political empowerment of those fishing communities. Through collective actions and coordinating mechanisms, which are set up in the forms of powerful organizations at their community-based or co-management arrangements, these local fishing communities are able to organize the influential bodies by themselves and they could raise their political voices to defend their accesses or rights to the natural resource against other users from the same sector, such



as large-scaled fleets, or against ones from the outside sectors, i.e. agricultural or tourism sectors.

G. Kelleher (1999:57-63), for instance, reports the example of the fishing associations along the shore of Lake Mweru on the border area between Zambia and Congo. One of the right motives for the associations was to set up the gear restriction rules to regulate the use of certain nets and traps. However, these associations are also used by the community as formal platforms to complain openly to the government about the declining catch. Their voices are considered good for the local management and the enforcement of conservation measures by the government. They also frequently request that the local councils should use some of the budgets from tax money for providing the better infrastructure for fishery trades.

This kind of empowerment, which is in particular crucial for the poorest and most marginalized communities, might be the way to be formally and legally recognized as legitimate users of the fishery resource. The positive outputs of these legal recognitions and empowerment processes may even have tremendous impacts beyond the fishery sector itself, and they could be beneficial to the community as a whole. An excellent example of such movement is observed in the community-based fishery project around Kainji Lake in Nigeria. One of the outputs of this project is the setting up and the enforcement of a licensing system by the community. Before the existence of this system, the local fishermen were not recognized by the local government as valid representatives during the governmental discussions on fishery management. This community-based licensing enforcement system, not only has given the legal status to the fishing community and their leaders, who are now allowed to join the official decision-making process of the fishery, but also has facilitated the

community access to alternative income opportunities, such as loans, which could be used for the investment for village infrastructure (Kelleher 1999:70).

In situations, where actors are left out from participations or decision-making processes, the creation of fishers committees, organizations, or associations could represent an effective way to empower the local populations. This empowerment is an integral part of the contribution of small-scaled fishery for its poverty alleviation, in particular, in rural areas where these local communities are more systematically affected by the political marginalization. This capacity of community empowerment offered by the small-scaled fishery sector is, however, still relatively overlooked in the academic works on fishermen, which usually emphasize and focus more readily on the capacity of these local arrangements to offer 'efficient' management systems for the conservation of the fishing resource and the cost effectiveness of the monitoring arrangements. Therefore, there is an urgent need to shift parts of the emphasis efforts toward the empowerment dimension of these local arrangements. Research is needed, in particular, to analyze more comprehensively and systematically their potentialities, but also to understand the mechanisms through which they operate so as to highlight their limits.

Broadly the term culture means people's shared knowledge, including knowledge about their language, history, mythology, religious beliefs, worldviews, values, normative behavioral patterns, ordinary means of subsistence, and conventional modes of social, economic, political and religious organization (McGoodwin 2001:8). Therefore, culture and cultural mechanisms control all aspects of fishing communities' life. In actual practice, the cultures of small-scaled fishing communities are usually the

results of accumulated adaptive experiences and changes at these communities over times, which are shaped by many internal and external events.

This cultural element of small-scaled fishery seems to be an essential element, which creates or maintains the self-esteem of fishermen at the individual level. Each member of small-scaled fishing communities usually has a profound pride of his professional identity as he highly devote himself to the fishing way of life. Fishing, especially over the sea, requires the high degrees of self-reliance, risk-taking, and challenging nature of feeling.

In addition, the fishing occupation is not only an essential marker of self-identity and individual pride, but also a satisfaction bonus that cannot measure on the economic ground alone (Pollnac et al. 2001:535). Small-scaled fishermen could play tremendous roles in improving the livelihood of rural communities through these mechanisms of collective actions, shared cultural identities, and senses of collective social norms. Indeed, those are less tangible than the direct increase of their household incomes, but they have remarkable positive impacts on empowerment, well-being, and collective and individual self-esteem.

However, it would be erroneous to believe that the cultural identity, which usually associated with fishing communities, is systematically the reflection of a long historical tradition of fishing. For instance, it is not uncommon to observe that some of the ethnic groups, which are highly specialized in fishing activities nowadays and who readily claim their historical affiliations to the traditional fishing culture, do in fact originate from the heterogeneous groups which were not necessarily involved in any fishing activities a few decades ago. In reality, some fishermen are frequently

newcomers, who have involved recently in the local fishing sector with the traditional identity.

R. B. Pollnac and others (2001:531-532) shows that, although the majority of the fishermen, who involves in migratory fishing activities in Ivory Coast, are said to belong to the ethnic group of Bozo, which is recognized having a long cultural tradition of fishing in the region, in fact less than 5% of them actually originate from this ethnic group; most of them used to be farmers from Burkina Faso. Some cases of appropriation of cultural identity are found typically in the ethnographical facts of a large number of fishing communities, especially in Africa. This instrumentation allows the individuals of these communities to access more easily the fishing resources through their claims belonging to an ethnic group, which is perceived as the legitimate group entitled to historical rights over these fishery resources.

The Tiku coast at the village of South of Tiku has about 12 km of shorelines, where the fishing is a significant economic activity. However, the fishery resources have been under increasing pressures. The fish catch is increasing, but the fishermen contribute to the degradation of marine resources, because their intensive fishing in some waters affects the ecological imbalance, which results in the loss of some fish stocks (Ermayanti 2014:161). Many coastal populations depend on the marine resources for their livelihoods; this symbiotic situation is in particular supported by coral reefs (Versleijen and Hoorweg 2008:7).

Coral reefs have many fish species, as they provide fish with feeding, spawning, and breeding grounds, as well as with shelters from their predators or from fishermen. At the village of South Tiku, Ujung Island has 9.67% of coral reefs and Tengah Island

14.48% out of the total coral reefs there (Elfita 2010:9), where the intensive biological diversity of coral habitats is well observed.

Because of more competitive situation between local fishermen and newcomers, many look for alternative income sources. Many fishermen has already involved in other income-generating activities. Ermayanti (2014:160-162) reports that the four-fifth of all the fishermen's households at the village of South Tiku has diversified their income sources in some ways. On average, each household 2.1 different occupations. The diversification of income sources is a sort of survival strategy in rural households across Indonesia (Adhuri 2013:66-70; Versleijen and Hoorweg 2008:8-11), and it is also a favored strategy of households for reducing risk. The diversification is expected to result in improving the households' incomes. Not only fishermen have started to diversify their livelihoods, but also many farmers living in coastal zones are now seeking to diversify their income sources as well. At the village of South Tiku, an increasing number of households are now giving up their fishing activities; more than 80% of the fishermen belong to the first-generation, sons of whom are not fishermen at all (Zamzami 2015:36).

In the Malay world, the fishing used to be a part of its peasant economy (Said 1993:31), but the fishing economy along the Tiku coast has been losing its primary characteristic of peasant economy. Most traditional modes of fishery production has becoming to be replaced by a new mode of production which is based on capitalism in the sphere of both its economic productions and exchanges. The social relations among fishermen are also being transformed from traditional ones, based upon family, kinship or communal ties, into a new capitalistic employer-worker relationship. The economic transformation along the Tiku coast leads to the disappearance of traditional small-

scaled fishermen, and to the appearance of new modern fishing, which is under the control of the governmental marine conservation management and tourism. A part of Tiku coast is now becoming a tourism area.

When planning and managing the marine resources either for fishing or for tourism, the integration of local stakeholders, local governments, and market actors is absolutely needed. The recognition of local stakeholder groups empowers local fishermen to participate in the decision-making process or, at least, to influence it. The government, through national laws and regulations, needs to ensure that the local leadership could be accepted by both the community and the government, which enables the local communities to manage and conserve the marine resources by themselves against the outside marketing pressures. The leadership of local communities for the management of marine resources could exert pressure on commercial fishermen from outside. The joint effort between community-based marine conservation and government-driven one could strengthen the implementation of the marine resource conservation both at local and regional levels.

Sometimes the market actors could also strengthen themselves for the marine resource conservation. The middlemen, for example, could encourage fishermen to catch fish with sustainable fishing methods, as they have always significant influences on local fishermen's livings. In the village of South Tiku, too, these market actors seem to be crucial in achieving the conservation goals. In addition, they could prepare for local fishermen the alternative income sources, other than fishing, which results in lowering heavy pressures on marine resources. If fails, however, this will backfire for the marine resources; the local fishermen will give up their new working options and

return to the previous work of fishing to intensify their maximum efforts to exploit the marine resources, which might destroy its sustainability.

#### **10. Participation of Fishermen's Households in Marine Conservation Area**

During the planning and implementing process of marine conservation area, the lack of knowledge about the interests of local communities causes the low level of supports from them. Mainly when the prioritization of stakeholders is based on political powers, governmental legitimacies, and legal backgrounds, most fishermen will be likely to be excluded out of these stakeholder groupings. L. Bunce and others (2000) highlight that the primary stakeholders are usually be identified as individuals or groups, whose livelihoods are highly and directly dependent on the marine resources and whose activities are affected by the marine conservation areas. Fishermen must be stakeholders.

Along the Tiku coast, the local government strongly supports the establishment of marine conservation area. If the communities had been decision makers or had correctly be consulted by the local government, however, its zoning area would have been entirely different in terms of its size, its place, and its regulation. The planning body should have provided more time to encourage the community participation and to discuss with the communities in order to receive full supports from the communities.

With the recognition of the local fishermen and women as the primary stakeholders, the marine resource management should be directed through the community participation (Chambers 1983:71-78). The community participation enables its social and economic factors to be incorporated in the management system of marine conservation. The partnership creates an opportunity for local fishermen to understand the consequences of the marine resource management and to articulate the

community goals for the marine conservation area. It allows local fishermen to understand the establishment process of marine conservation and to realize their objectives. The attributes might not be changed or ignored, but they might be restructured to make them operational. Greater involvement of local fishermen also reduces the incidents of significant conflicts and compliance problems among them. It raises the level of political commitment and local ownership from fishermen and other stakeholders, and these are essential factors for the successful marine conservation management (Crawford 2002:17; Pollnac and Pomeroy 2005:236).

Since local fishermen comprise several entities, both within and outside the community, a question arises whether local fishermen from outside could use the marine resources or not. The community participation should include the fishermen even from outer villages, if they are exploiting the marine resources for a long time. In the case of the Tiku coast, the fishermen from the cities of Pesisir Selatan, Padang, and Pariaman, or ones from Nias Island or the port of Sibolga in the Province of North Sumatra, catch fish around Tengah Island and Ujung Island. Ignoring these fishermen from outside would result in tensions and conflicts between the local fishermen and them, which is not good for the marine conservation management.

Local fishermen should participate in the planning and management process of marine conservation area; the involvement of local fishermen's representatives is essential. However, the selective election for these representatives must be done among local fishermen, which is thought to be a critical and important democratic procedure by the local government. In Agam Regency, the local fishermen's representatives should be full members of local households, not among newcomers.



Several conditions look to be needed for the community participation in the marine conservation management. First of all, the stakeholders' involvement has an emphasis on the empowerment, based on trust, equity, and learning process (Schorr 2005:42). Social confidence should be built to enable the community participation (Singleton 2000:15). Basic information and knowledge of marine resources could be helpful. Because each fisherman has different views on the marine conservation management, sharing information on the benefits of its conservation could help the local fishermen to decide the best options, for instance, for the Tiku coast. By providing information in advance, the fishermen are able to receive the better feedback and to contribute to the objective decisions. Secondly, the communities have to be involved from the beginning of the process for the marine conservation management. Thirdly, an adequate time must be allocated for the fishermen's community to have the full engagement. Fishermen are always busy, and their priority is to catch fish for their families; their time involved in the marine conservation management takes them away from their fishing. The government should compensate them for their loss. The management body has to be patient to match the time of fishermen and its task. In addition, fishermen are not used to having extensive discussions. To encourage the community participation takes energy, but it could help eventually the implementation of the marine conservation management. Finally, different groups within a village should be invited for the discussions; normally village leaders cannot be the representatives as most are not fishermen.

The team of the marine conservation management needs to hold frequent meetings with the communities in order to encourage more villagers to participate. One session at a hamlet level is not enough to inform the communities everything, let

alone to expect their involvement in decision-making. The marine conservation area in Agam Regency is one of many conservation areas in Indonesia, all of which have been allocated the effort to achieve global conservation targets for. However, there is a need to scale down the global concerns to the local interests. If the local people realize that harvesting pressure on natural resources threatens their livelihoods and businesses, they will most likely support efforts to protect their livelihoods. If incentives are promoted for efforts by local fishermen to preserve the resource, moreover it will likely contribute to the success of marine resource management (Acheson 2005:355). Prioritizing local problems allows local fishermen to incorporate the conservation issues into their daily lives.

The local governmental objectives for the marine conservation area in Agam Regency are intangible and they are taken literally from some national laws without recognizing local problems. Unless the goals are clear and their consequences are well known, local fishermen should not be expected to understand and to support the establishment of marine resource conservation.

The significant contributions by women to sustain the socio-economic well-being of their families has been long neglected. As a result, the female economic contribution and its potentiality have been underestimated before. In recent years, however, there has been considerable concern about the need to acknowledge and to stimulate female financial contributions and participations in development programs. In Malaysia, for example, the concern for increasing female economic participation could be seen within the socio-economic condition of poor households, especially those in the rural zones. The persistent poverty and deteriorating their economic condition have forced many women from their rural families to work outside their

homes to venture into various economic activities. In many Malaysian households, actually, women have to work for as long as 15 to 16 hours per day, for carrying out their domestic chores, such as cooking, washing, cleaning, taking care of their children, and working in their family fields, plus their income-generating or income-substituting activities, such as working as seasonal labors during the peak agricultural seasons and engaging in some small businesses. Women in Malaysia are no longer confined to their traditional gender roles as wives and mothers, but frequently they are now wage workers and additional income earners for their families.

Although many women are working in other sectors of the rural economy, women at small-scaled fishery are not usually recognized as being economically important. In the village of South Tiku, however, many women engage in various fishery related jobs, spending long hours for such income-earning activities. The possibility of female participation into tourism related activities is relatively new, but in this arena, the female economic potentiality could be utilized. For tourism, we need more guest accommodation facilities on the beach or on offshore islands. For the time being, there are not many accommodations for tourists; only a few fishing households at the village of South Toku have just started to run cheap guest houses for tourists on a small-scaled basis. The possibility of female participation for tourism seems to be huge; the daily management of such accommodations, which means tidying rooms up, cleaning room, cooking, and washing, is mainly done by women, who do the same routine housekeeping chores everyday. In addition, this job could open other income-generating activities, such as retailing local handicrafts, operating small restaurants, and organizing recreational or entertainment activities, for tourists, which usually do not need any special skills and experiences.

## CHAPTER VI

### THE LOCAL WISDOM FOR STRATEGIES OF POVERTY REDUCTION

#### 1. Introduction

Etymologically, the term local wisdom consists of two words, viz. ‘local’ and ‘wisdom’. The word local means regional or indigenous and the word wisdom equates prudence or sapience. In other words, the concept of local wisdom could be translated as local ideas or full of local knowledge, having good values, which are embedded in the community and are followed by its community members (Jundiani 2018:2; Rosidin 2016:26).

The local wisdom could be found in many regions in Indonesia. Papua has the belief of ‘nature is me (*tea aro neweak lako*)’, where the Erstberg and Grasberg Mountain is believed to be as a mother head and the land as part of human life. Therefore, it is essential for locals to utilize natural resources there carefully. The ethnic group of Serawai in the Province of Bengkulu has the belief of ‘rejecting dangers (*celako kumali*)’. This concept for the environmental sustainability derives from their belief of a taboo value in their agriculture system and their ‘opening new land (*tanjak*)’ tradition. The ethnic group of Dayak Kenyah in eastern Borneo has the tradition of ‘communal land (*tana’ulen*)’. As their forest territory belongs customarily to their community, its customary rule regulates the land management. The community of Undau Mau in eastern Borneo develops their environmental wisdom for their settlement arrangement pattern by classifying and by using the forest. They run the shifting cultivation with fallow periods, but they refuse the use of modern technology and only employ the simple and environmental friendly technology. The community of Kesepuhan Pancer Pengawinan at the village of Dukuh in western Java acknowledges

the traditional ceremony, myth, and taboo for utilizing the forest carefully. They are allowed to exploit it only as permitted by the elders. Every traditional society in Bali and in Lombok have its 'own customary law (*awig-awig*)'. By realizing the importance of local wisdom, we could use the values of local wisdom in developing civilized societies (Jundiani 2018:4).

The local wisdom among fishermen consists of 3 facets, viz. the perception of nature through knowledge of species and other environmental phenomena, the use of nature for survival, and the application of knowledge to manage the relationship between human beings and environmental or natural resources for the benefit of humanity (Berkes 2012:11). However, these facets are largely underutilized for small-scaled fishery management. On one hand, as the local wisdom is considered anecdotal and 'unscientific', it is inappropriate for current 'scientific' management strategies for fishery. On the other hand, however, it has been increasingly recognized that the local wisdom of fishermen could be used in order to establish the effective dialogue between fishermen and fishery resource managers, which could foster in turn the sharing of power and responsibility between governments and local resource users (Berkes 2009:11-13; Silvano and Valbo-Jorgensen 2008:658).

Beach seining is one of the most traditional coastal fishing methods widespread through Indonesia, in which the traditional fishery management mechanisms based on fishermen's local wisdom are frequently observed. In the Province of West Sumatra, for example, beach seiners are reported to be incorporated into the world of traditional customary laws; the formal legal procedures are always needed for resolving conflicts over their fishing rights or their sharing systems of the catch.

In coastal communities of the Province of West Sumatra, the local wisdom, which has been evolved through experiences of fishermen and empirical information about fishing activities associated with the environmental factors such as monsoons, lunar phases, and some knowledge about marine physical environments or fish habitats, is known to be important in formulating fishery management strategies (Zamzami 2011:122-123). Due to the differences in terms of cultural norms among some coastal communities, however, the bodies of local wisdom, which are empirically based and practically oriented, are various and often unique to regions. The increasing recognition of the local wisdom for the coastal fishery management induces more investigations of beach seiners in different geographical locations, especially due to the fact that beach seining is a small-scaled coastal fishing method which is always supporting the livelihood and food security at coastal fishing communities.

In the village of South Tiku, the traditional beach seiners use their local wisdom to predict the commencement of fishing season, and to identify and quantify the species composition within their fishing waters (Ermayanti 2014:155).

## **2. Aspects of the Local Wisdom in the Fishermen's Community**

At the village of South Tiku, some local wisdom forms are used for the conservation and preservation of nature; the villagers recognize the local wisdom as the adage, the trust, the ethics or the moral meaning, which could control everything and even could integrate the elements of foreign culture into the indigenous cultural system (Zamzami 2011:122). The local wisdom has full of life values, which are inherited from one generation to generation, sometimes in the form of oral traditions of belief, culture, or custom at the social system. The existence of local wisdom in the community is the result of the adaptation process toward the environment over long

periods, in which people have inhabited and have had various different situations with frequent human interactions therein. W. Abdullah (2015:139) states that the local wisdom could be understood as a human effort to use the cognition to act and to behave toward things, objects, or events which occur in a given space. In other words, to understand the local wisdom as a personal ability to reason his mind or to act or behave as a result of an assessment of things, objects, or events, is important. In particular, locally it has the limited interaction space with a system of limited value. This interaction space has been designed in such a way, which involves a relationship pattern between a man and a man or between a man and his physical environment.

Abdullah (2015:139-140) defines a more detailed meaning of local wisdom as the knowledge built by the community for generations, which is related to the relationship between nature and natural resources. At a society, its local wisdom includes all knowledge related to social sciences, politics, and geography. According to F. T. Christy (1992:34), there are 6 things which have to be met as conditions of the local wisdom for environmental management. First of all, the condition of natural resources should have its obvious characteristics, for example, in the form of the coral reef or mangrove ecosystem. Secondly, the boundaries have to be clearly owned and are predetermined, for example, for the extended zones to which we may catch fish. Thirdly, the catching technology have been determined according as the types of gears and the types of species which are always set in the local wisdom. Fourthly, the local culture have to be modeled in according to the indigenous empowerment so it will not be clashed. Fifthly, the wealth distribution has to be protected for existing institutional models. Finally, the governmental authorities and agencies should also be able to make decisions which are integrated to other related sectors.

An example of the local wisdom for the marine environmental management in Sumatra is the headman of the sea (*phanglima laot*) in the Province of Aceh. All other local wisdom forms in Indonesia are also frequently used for the local environment preservation. At the village of South Tiku, many villagers are fishermen, being the Muslims, and so its local wisdom is also greatly influenced by the dominant Islamic religion, which could be used as profile of the fishermen's community and as a reference for the pro-environmental management. There, living economy, local wisdom or religion, and environmental issues are moving hand in hand.

Many villagers and newcomers are engaging in fishing at the village of South Tiku, but some ancestors of fishermen were farmers who worked their inherited customary agricultural lands. Even among these farmers, however, the agricultural local wisdom is ubiquitous. Frequently such agricultural local wisdom has influence upon the local wisdom on fishing activities or marine conservation rules there. The village of South Tiku discerns 4 categories of the local wisdom concerning its fishing activities which are always exploiting the natural environmental resources, viz. spiritual wisdom, environmental wisdom, cultural tradition wisdom, and economic wisdom.

#### **a. Spiritual Wisdom**

Some beliefs in supernatural beings and powers are exclusively related to the local wisdom at the village of South Tiku, which are extremely important for villagers, in particular, at engaging their economic activities of fishing. Many of them belong to the ethnic group of Minangkabau. These beliefs seem to have deep roots, which are pre-Islamic or Islamic, in the traditional fishing community. The villagers believe that



everything around their marine environment, such as the sea, mangrove forest, river, has spirits or souls. According to these beliefs, their economic activities are not merely determined by their good skills, excellent fishing boats, or efficient fishing gears and traps, but also by the way how well they interact at sea with the supernatural forces which are essential parts of their life and world.

According to these beliefs, in addition, the fishermen tend to avoid misfortunes (*penolak bala*). If sea conditions are too bad, they are not allowed to go to the sea for fishing; they cannot go to the sea, as they think the supernatural powers forbid them to do so. Indeed, the weather at sea is always unpredictable and storms frequently occur, the longest season of which lasts up to 7 months. If the fishermen cannot go to the sea, their economic situation would be deteriorated. For the purpose of requesting the help for the God, they always hold religious ceremonies, where they do a series of ritual recitations to reinforce the natural harmony, and then they slaughter one cow as material offering to the sea and to the God.

Even in their everyday living, the traditional social groupings of religious recitations are well institutionalized at the village of South Tiku. These religious meetings and gatherings (*yasinan*) are regularly held, participated by many fishermen's households. Almost all mothers of the households take the responsibility for routine preparation or performing works of these groups. Usually, such religious meetings and gatherings are held once every 2 weeks, with the rotation from one house to another house.

## **b. Environmental Sustainability Wisdom**

Along the Tiku coast, an effort for keeping the sustainability of coastal environment which empowers fishermen to use the local wisdom for 2 purposes. One is the purpose of changing the governmental policies; the governments sometimes would like to do some structural changes in the framework of laws and political practices of the marine resource management against the needs of the local community, which opposes the governments with the knowledge of local wisdom. The other is the purpose of strengthening some communal institutions of the local wisdom, which could give the new information for new business chances or tourism activities to small-scaled fishermen.

Presumably, therefore, the local wisdom along the Tiku coast seems to help the marine resource conservation or to give supernatural powers to its management activities, because it is regulating the daily lives of fishermen everyday as the norm or rules which favor the ocean environment at the context of coastal and marine resource management. According to several informants, when the village of South Tiku has traditional events, the whole community is full of high enthusiasm, forgetting the traditional property ownership and allowing them the public open access. This kind of behavioral pattern looks also to be originated from the local wisdom. In order to take the best advantage of natural surroundings, the similar pattern could be observed. With the local wisdom, villagers are doing unconsciously their activities which are the most potentially beneficial to the community-based management of marine resources (Zamzami 2015:35).

According the local wisdom, fishermen at the village of South Tiku are using coconut leaves (*daun kelapa*) for the purpose of making artificial fishing reefs. They

sometimes make them by using woods or bamboos, but the number is decreasing. Every fisherman is able enough to make such environmental friendly fishing traps, which are usually set not far from the shoreline.

### **c. Cultural Tradition Wisdom**

At the village of South Tiku, according to the local wisdom, the cultural ceremony of slaughtering cattle (*festival babantai*) is held at the first day after the end of the Islamic holy month of fasting (*Idul Fitri*); as many as 300 buffaloes and cows are slaughtered annually. At the Islamic festival of sacrifice (*Idul Adha*), in addition, more than 300 cows and buffaloes are slaughtered. However, these rituals are rather religious.

As for the local wisdom, the fishermen's party (*pesta nelayan*) is much more important at the village of South Tiku, which is said to have been handed down from their ancestors. Around 100 cows and buffaloes are slaughtered for the purpose of expressing their deep gratitude to the God for the favor, in particular, for the favor giving the abundant catch to the fishing community. Indeed, this ceremony is smaller than Islamic festivals, but in former days villagers could eat animal meat only at this fishermen's party for their ancestors of dignity, who are still living in the hearts of many fishers. This party has 2 practical functions: villagers could buy fresh meat at affordable prices, and its crowded atmosphere could produce a sense of unity among communal residents. During this party, in particular, the relationship between maternal uncles and nephews are stressed according to the Minangkabau customary law.

The local wisdom could strengthen the social ties or networks as well. In rural areas, these are based on their kinship or friendship relations. Because of the local wisdom, these trustworthy ties between villagers are extremely strong, because it tells them that such ties come from the high confidence in supernatural beings and powers. Therefore, the debt relationships among households could not become serious problems. In a sense, the local wisdom maintains the existing social networks, which always support poor families. Even they are not poor, any fishermen's households occasionally face the urgent financial difficulties in the case of sickness or poor result of fishing. These borrowed money from other family members or friends is rarely used for purchasing consumer goods. According to the local wisdom, the relations between borrowers and lenders are equal, without any social classes; the ties of kinship and friendship relations around the neighborhood are leveling them. This egalitarian relationship pattern tends poor families to access much easily to various forms of local financial institution.

Many fishermen at the village of South Tiku tend to form some financial groupings or institutionalized associations for the purpose of saving up a huge sum of money collectively for loans or for credits, although the local wisdom says that these are 'social' groups. No less than 20 associations of such groupings are observed there. By using this system, fishermen could start small trading businesses, building houses, holding marriage ceremonies, going on a pilgrimage, or purchasing fishing boats or gears. Some villagers use this money to buy small buses for the new traffic business, which carry freshfish or processed fish to the markets.

The local wisdom at the village of South Tiku is supporting the fishermen's survival space with limited capitals and fishing facilities. The cultural ceremony of

slaughtering cattle or the fishermen's party is held on the basis of their local wisdom, which maximizes the village productivity as well as the human socio-cultural relationships with the attitude of mutual cooperative feeling among fishermen. In addition, some bodies established by the philosophy of local wisdom could help fishermen to have chances to have better new income sources.

#### **d. Economic Wisdom**

The local wisdom also say that, to do the good economic quality of fishing, a group of fishermen has to be united and every fisher have to work for other fishermen's benefits. Therefore, the individual behavior is critical for the realization of active fishing groups with a leader, who has an influence upon other fishermen. According to the local wisdom, a leader or his leadership should not only a high economic powers but also a good moral state, which give other members of his fishing group more satisfaction of catch or fishing operation itself. In this case, the importance of solidarity, mutual respect, or mutual help is widely manifested as well. The economic aspect is not the precondition, but the result only. When fishermen face the economic difficulties, they help each other in terms of economic needs or they use financial mutual associations which are established by the economic necessary. Deep down, however, the local wisdom backs such economic activities from behind; this fact seems to be related to the general uncertainty of fishing results.

### **3. Poverty Reduction of Fishermen's Households**

According to the local wisdom, local villagers believe that all human activities always coexist with the nature that has provided abundant natural resources to be

utilized for the fulfillment of their living needs. For fishermen in particular, nature has a great influence on their fishing activities; they look only for marine resources such as finfish, shellfish, or seaweeds, which human being usually cannot change. Therefore, religious ceremonies and traditional rituals are indispensable for fishermen. The local wisdom is closely connected to local knowledge on the sea, including on wind directions, on fish seasons, or on waters where fish is available, which is basically gained as hereditary property by fishermen. In addition, the local wisdom at the village of South Tiku is frequently manifested in the form of moral and physical mutual assistances among kins and friends, which leads the villagers to live in harmony in the community. The local wisdom supports potentially the survival strategy of local fishermen's households. In other words, the local wisdom, as an external factor, could optimize the strengthening of family functions. Indeed, we cannot remove some internal factors, such as the Minangkabau kinship system, from the survival strategy of the fishermen's households. However, all recognize that the good cooperation inside families, especially between husband and wife, is vital for the family system.

At the village of South Tiku, the local wisdom and some social institutions arising from it are used for strengthening the poverty reduction strategy of the families. Both social components are interrelated in supporting the survival of fishermen. In the social system, some external factors also affect human actions, especially from the internal side of the families or households. The families with limited economic properties and resources cannot survive if they have neither external supports nor internal supports. This is the social system of fishermen's life at coastal communities.

For reducing poverty, the families are given more opportunities to women or wives in their fishery activities. Their economic capacities are being increased in the village of South Tiku. First of all, women set up small industries, which utilize local raw materials, such as freshfish or seaweeds, their traditional skills, and their craftsmanship. They are required only a small investment, with simple hand-operated technologies. The manufactured products are readily sold to the markets. Secondly, they always set up their workplaces near their households, where traditional related economic activities, such as weaving, making silverwares, tailoring, sewing, gardening vegetables, or rearing poultries, have already long carried out by females. This cramped location has several financial advantages for a female business; each woman or fisherman's wife could engage both traditional domestic routines, which are based on the indigenous division of labor, and the new business; it is small enough to see all production processes, marketings, or distribution systems; it enables them to do closer supervision over employed workers and to control the quality of products effectively; because it is near to her households, it could offer better working conditions to workers; and, it could facilitate the transfer of technology or the dissemination of knowledge and skills over other villagers.

Frequently, thirdly, women or fishermen's wives initiate the special programs for other women in the fishing community to promote the cooperative forms of economic organizations, such as seafood processing cooperatives, credit and marketing societies, and producers' associations. The women are not only working for themselves, but always for the whole community, which results in the reduction of poverty in the community. Finally, women try to diversify some types of non-fishery activities, in particular, for fishermen's wives who are dependent only on the available

marine resources, traditional working patterns, skills and interests, and the indigenous nature of the regional economic structure.

The poverty reduction at small-scaled fishery sector is under way, at which the wealth is generated and the capital is accumulated through investment processes at fishermen's community. This economic movement could rescue poor families from their poverty. In this regard, each poverty reduction strategy should be closely monitored or measured by the change of standard definition of poverty or the total number of people under a given poverty line. In contrast, the poverty prevention needs a kind of social role of economic activity in helping people to maintain a minimum standard of living even when this minimum standard of living is under a given poverty line, which prevents them from falling any deeper into poverty. The poverty prevention in small-scaled fishery communities, therefore, leads to situations, where fishing activities are contributed through various mechanisms to reduce risks and create safety-net arrangements in a general context of vulnerability (Béné 2007:18).

The establishment of protected zones in the marine conservation area along the Tiku coast seems to exert great influence on the fishermen's everyday livings. However, the question whether it will leads the poverty among fishermen or not still remains. Indeed, if new job opportunities, owing to the zoning demarcation, are available for them, in particular their wives, it would be help the poverty reduction. Generally, however, it seems to change all aspects of fishing communities and their lifestyles completely, as the fishermen and their wives are not merely the resource users anymore, but they have social and cultural interactions with the marine resources. Learned from some experiences from the establishment of other marine conservation areas in Indonesia, a few researchers find the establishments of marine conservation



areas have positive impacts upon local fishermen in terms of their incomes or fish catch which is protected by these area. At the village of South Tiku, these impacts have started to be observed around Tangah Island and Ujung Island in particular. Because of the tourism sector, they have succeeded in the poverty reduction, having the economic well-being. Still, most of them live on the local wisdom which could alter them for the better, out of poverty.

## **CHAPTER VII**

### **CONCLUSIONS**

This dissertation has examined the general ethnographic materials among the ethnic group of Minangkabau and the fishermen's community along the Tiku coast, i.e. the village of South Tiku, Tanjung Mutiara District, Agam Regency, the Province of West Sumatra. The local wisdom there has been reflected from the way how fishermen make use of the marine resource to make a living or to obtain their welfares, which has a great opportunity to be managed and to be empowered to regulate their daily lives, the norms, and the rules that favor the ocean environment, in the context of marine resource conservation. The sustainable analysis of their occupations was used as a framework for the data collection and an analysis to examine the fishermen's livings. Several methods were used for data collections, including participant-observations, semi-structured interviews, or documentary reviews. The results could provide a rich understanding of the potential implications of marine resource conservation along the Tiku coast and of some practices implemented by stakeholders to balance the goals of marine resource conservation and the improved living standards.

The local fishermen at the village of South Tiku used to engage only in fishery, but since the marine conservation area was established they have started to attend some forums on preliminary information for biological resource, to establish some cooperative institutions, to attend the meetings for zoning activities, and to join the maritime patrol over the area. Still, however, most of them have not been involved in the decision-making processes. G. S. M. Andrade and others (2012:16)

highlight that the community participation in decision making processes in 52 protected areas globally is the only variable that significantly relates to the compliance of stakeholders in marine resource conservation. The consequence of this lower levels of participation in decision-making along the Tiku coast results in the lack of commitment of the local communities, which causes several instances of tensions. The government authorities still frequently consider fishermen to be less important stakeholders. The government authorities might need all the stakeholders, but some of them are always village leaders who are not representatives among fishermen. The government thinks the attendance of village leaders is a sort of community participation at the village level, because the government authorities often lack the ability to recognize the heterogeneity of coastal communities (Singleton 2000:18). In the case of the marine conservation area at the village of South Tiku, the elective selection of representatives procedure is not clear, and there is no open system for the share information from the representatives who attend the meetings or forums with wider communities.

Therefore, the local communities are not able to achieve the highest degree of participation in the village of South Tiku, without any citizen powers. The varied degrees of local participation show that the planning bodies are unclear about the degrees to which the communities should be involved. In the case of the marine conservation area in the village of South Tiku, they play major roles in managing the marine resources. Learned from this situation, paying attention to maintain good relationships with the local communities is really necessary in order to encourage the community to be involved and gain its local support.

The coastal communities conduct various activities. However, the ways how local fishermen use and manage their assets indicate that the fishing-related activities are major parts of the diversified economic activities. In terms of human assets, this research shows that fishermen in the village of South Tiku invest their time, knowledge, and skills in their fishing-related activities, more than in any other activities such as agriculture or trading.

In terms of natural assets, the fishermen target the multiple marine species with various sizes and classes. The findings indicate that the sustainability of several species should be of concern. The fishermen usually do not let smaller fish go, as there is no guarantee that they would catch it tomorrow. This fact is a kind of classic tragedy of the common pool resources. Depending on the fishing seasons, the fishermen mainly exploit pelagic and reef fish on almost all waters in front of the Tiku coast. Most of the captured fish, which I have seen before, were undersized and prematured. Shrimps are also collected, but its catch per fishing unit is decreasing and their sizes are reported to becoming smaller. The coastal fishery along the Tiku coast is potentially vulnerable for the time being, in terms of the sustainability of fish stock; the fishery needs to have the better management system to avoid these stocks being depleted in the future.

In addition to these physical assets, the good condition of public infrastructure at the village of South Tiku could give the good opportunities for fishermen's households to expand their trading and other commercial activities. However, most fishermen still invest money in fishing boats and gears only. The analysis of financial assets of fishermen around the city of Padang shows that their allocations of money for fishing boats and gears is the largest. At the village of South Tiku,

however, the expenditure for fishing boats and gears is the second priority, after the greatest costs for performing traditional ceremonies.

The analysis of the occupational area indicates that each fisherman at the village of South Tiku has his own strategy to live and to cope with some difficult situations. 3 different strategies used by the fishing households are observed: adaptation, diversification, and migration. First of all, the coastal communities have adapted themselves to the ocean environment or its climate since olden times. They carry out several maritime activities, which are fully dependent on the monsoons. During the peak fishing seasons they intensify their fishing activities, catching as much as they could in order to increase their incomes. Secondly, fishing is the main source of living for fishermen, but some fishers also work on agricultural plots or farming seaweeds. They usually have multiple sources of income as a occupational diversification strategy. These days, nevertheless, the opportunities are becoming fewer to find new jobs. For this reason, finally, some people try to migrate to work in towns and in cities. In other cases, they become the seasonal or temporary fishers at city of Padang only during the fishing season of tunas.

An overview of the contribution of small-scaled fishery on their living and on the local marine resource conservation is outlined in this dissertation. Although some positive results could be highlighted which confirm that the small-scaled fishery could play an important role with respect to the key development issues such as poverty problems or food security problems, this analysis shows that assessing the global contribution and importance of small-scaled fishery is neither an easy task nor a straight forward exercise.

The greatest limited factor at the present time is the severe lack of data from many foreign countries that prevents researchers from being able to demonstrate, in a more rigorous and reliable manner, the importance of small-scaled fishery. In addition to the lack of data, the outcomes of these assessments depend to a large extent on the indicators chosen to carry out the analysis and the economic levels at which the analysis is carried out.

At the macro-economic level, thus, the importance of small-scaled fishery appears to be relatively small in comparison to other major economic sectors attracting the attention of donors and policy-makers, such as agriculture; only few countries have seen their GDPs significantly increased by the contribution of the small-scaled fishery sector. However, those are essential for small island developing countries, and a few other countries, such as Indonesia, should be considered as exceptions rather than general cases.

For the rest of the developing countries, the impact of the small-scaled fishery sector still remains relatively modest at the macro-economic level. Even when the fishing trade figures are considered where spectacular results have been achieved at national and international levels over the last 2 decades, the recent analysis shows that these massive increases in the volume of fishing trade have had rather limited positive effects on the ground, in terms of the poverty reduction and the improvement of living standard for the small-scaled fishermen, processors, and middlemen. While some experts' reports predict the general trickle-down effects, the reality shows a much more varied and uncertain outcome for the poor fishermen, with some winners but also a large number of left-aside groups.

The integration of these poor fishermen's groups into the wider markets as a result of the globalization process does not seem to be systematic, and therefore there is a need to use the fishing trade with aggregated figures with much greater caution than they have been used in the past when they were put forward in various types of documents to promote the international export by small-scaled fishing sector as a vector for the economic development. In contrast, it seems that, at the lower levels, the potential contribution of small-scaled fishery might be much more tangible in terms of supporting their livings. In particular, the role played by this sector in households and local communal economies, or even sometimes provincial economies, at the geographic area of coasts, rivers, lakes, or floodplains where fishing is important, could be substantial. Through the direct and indirect food security mechanisms or employment structures, fishery and its related activities, such as processing fish and trading fish, could play a significant and crucial role, especially for the poorest households who depend more heavily on these fishing and fishing-related activities for their livings.

Even at those micro-economic levels, however, the exact role of the small-scaled fishery sector still varies greatly, depending on a series of contextual factors, including the resource status, such as underexploited or overexploited, and other micro-economic factors, such as the households' access to some financial institutions or their levels of wealth. Equally, the nature of the poverty alleviation mechanisms should be considered. While the poverty reduction capacity could generate the wealth of local small-scaled fishermen, it is usually so only when the access to fishing waters are confined only to local people, therefore benefiting only a few. In contrast, it is

often the case that small-scaled fishery provides the vital poverty prevention mechanisms through welfare producing and safety-net mechanisms.

This poverty prevention or reduction function does not necessarily generate the large revenues or wealth, but it allows a large number of poor vulnerable households, in terms of the use of marine resources, in rural communities to survive both economically and nutritionally. In fact, for the majority of these households, small-scaled fishing, processing fish, or trading fish represent only part-time activities which complements or are complemented by other activities, as part of a diversified living strategy that aims at minimizing individual household risks in a economic, political, and climatic uncertain environment.

In this respect, a key question is the identification of the economic and socio-institutional conditions under which it would become advisable to promote a shift from a poverty prevention or reduction situation, where fishing activities sustain a large number of poor villagers but result in relatively low productivity rates, to a situation of poverty reduction, essentially through capitalism oriented technology and restricted access. This is the key political issue, which deserves much more attention that it has been received so far. In that respect, an increasing number of researchers, based on their anthropological field experiences, strongly doubt about this possibility, and warn us against the social and economic impacts of such a policy orientation. They argue that small-scaled fishery in developing countries is much more crucially needed to mitigate economic uncertainty and prevent negative poverty impacts than to support or generate economic growth. In their view, stressing the safety net role of the fishing sector should be remained as central role, if one wishes to focus on the extremely poor fishermen.



The existence of the traditions from the local wisdom such as cultural ceremony or fishermen's party is indispensable for the marine resource conservation, which comprise controlling fishing gears, using no harmful gears, catching and killing no sea turtles, or throwing no rubbish into the sea, managed by the controlling sector, and seeding and planting mangroves or coral reefs along the shore, managed by the resource sector. At the village of South Tiku, the various forms of activities concerning marine and coastal resource conservation are carried out by local fishermen, whose behaviors are always based on the value and culture of their local wisdom .

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**Photo 2. The Condition of the Tiku Coast**



**Photo 3. The View of the Village of South Tiku, Tanjung Mutiara District, Agam Regency, the Province of West Sumatra**



**Photo 4. The Tiku Coast at the Village of South Tiku, Tanjung Mutiara District  
Agam Regency, the Province of West Sumatra**



**Photo 5. The View of Fishermen's House at the Village of South Tiku, Tanjung  
Mutiara District, Agam Regency, the Province of West Sumatra**





**Photo 6. The View of Beach Seine (*Pukat Pantai*) at the Village of South Tiku, Tanjung Mutiara District, Agam Regency, the Province of West Sumatra**



**Photo 7. The View of Fish Catch by Fishermen at the Village of South Tiku, Tanjung Mutiara District, Agam Regency, the Province of West Sumatra**



**Photos 8. The View of Marine Resource Conservation at the Village of South Tiku, Tanjung Mutiara District, Agam Regency, the Province of West Sumatra**



**Photo 9. Turtle Conservation at the Village of South Tiku, Tanjung Mutiara District, Agam Regency, the Province of West Sumatra**



**Photos 10. Fishermen's Party (*Pesta Nelayan*) Announcement at the Village of South Tiku, Tanjung Mutiara District, Agam Regency the Province of West Sumatra**



**Photos 11. Fishermen's Party (*Pesta Nelayan*) Activities at the Village of South Tiku, Tanjung Mutiara District, Agam Regency, the Province of West Sumatra**