Local Wisdom of Jerieng Tribe in Utilizing Biological Resources

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Abstract. Jerieng Tribe is one of the ethnic groups found in Bangka, precisely in Simpang Teritip District, West Bangka Regency. The Jerieng ethnic group is included in the Malay tribe of Bangka, in addition to the Lom ethnic group and the Sawang ethnic group on Belitung Island. Biodiversity of plants and animals has been widely utilized by the Jerieng Ethnics in fulfilling the needs of life, such as food, medicine, customs and cultural rituals. This study aims to examine the use and local knowledge of Jerieng Ethnics in utilizing and protecting biodiversity. The method used is Ethnodirect Sampling and Open-ended Interview. The Jerieng people have local wisdom in utilizing plant biological resources, such as traditional home and clothing, folk weapons, musical instruments, herbal medicine, and alternative food. For animal biological resources, such as the implementation of existing rituals, clothing. Traditional medicine and musical instruments. The utilization of biological resources must have a conservation strategy involving indigenous institutions, indigenous peoples, local Governments (Regents and village heads), and the central government (Ministry of Environment and Forestry). In conclusion, the Jerieng people kept their customary values and traditions and implemented a conservation strategy in the utilization of biological resources.

1. Introduction

Based on the oral literature of the Jerieng people, the natives of Jerieng are sourced from the residence of the indigenous peoples of the Jerieng kingdom who settled in the old land around the river Jerieng there are jering plants (*Pithecelobium lobatum*). The kingdom ended in 686 CE during the time of Raja Radindo Sri Maharaje Asal Jaren and Radindo Sri Pengeran Aso Jaren. Jerieng Kingdom collapsed because the earth was hanged by the Sriwijaya kingdom due to disobedience to the Sriwijaya kingdom. The Kingdom of Jering's disagreement is written in the City of Lime inscriptions [1-10]. Today, the Jerieng people are scattered in 13 villages in Simpang Baranip district, West Bangka Regency. The Jerieng has a pearl of sublime local wisdom, it is seen from language and script, the social level of Jerieng Malay, house, customary clothing, historical objects, and Customs [9]. The values and norms adopted by the Jerieng people, including the traditional community, have been formed for a long time, thus creating local wisdom and a community that cares about biological resources.
Public knowledge of the utilization and protection of biological resources is a fundamental capital for conservation practices. The conservation community at the traditional level has long been the value and norms prevailing in the life order of the community so that the inheritance of management strategies, utilization, and protection of biological resources must continuously cling from generation to generation. Malay people, especially Jerieng who occupy Bangka Island including traditional society or indigenous people who are able to gather empirical knowledge from elders to succeeding generations in speech and practice so that community interaction with environmental and biological resources continue to be inherited well from hundreds of years ago. The traditional ecological-centric view of the community is generally a replication/repetition process of how they behave in biological and biotic environments and Abiotics [11-15].

There are at least three things about why traditional knowledge is important. Firstly, traditional knowledge is an effective alternative to scientific knowledge so that the expectation of government policies related to sustainable development is relatively more acceptable to society. Secondly, traditional knowledge can be self-sufficient and self-sufficiency in society because it is relatively easy to understand and master. Lastly, in terms of implementation/application of traditional knowledge is generally relatively cheaper applied [1]. In the traditional society of knowledge manifested in the form of a set of rules, knowledge, skills, values, and ethics to govern the social order of the community that continues to live and develop from generation to generation [14]. The dynamic, sustainable, and acceptable nature of community-related information, skills, practical and technological, trust, materials, experiments, biological resources, human resources, education, and communication. This traditional knowledge is only owned by certain people in the local community such as knowledge utilization of plants and animals that are useful for society such as food, medicine, customs, cultural activities [11],[14]. The traditional knowledge of the Jerieng tribe in the management of biological resources (animals and plants) as local value of ecological wisdom has never been written thoroughly and systematically, so this research becomes important and has newness from the ethnobiological side. The purpose of this study is to document the management and strategy of biological resources undertaken by the Jerieng people.

2. Research Method
This research was conducted in 13 villages in the district of Simpang Teritip, where the people of Jerieng has long-lived (indigenous) in Bangka Island. The life of the Jerieng tribe community belongs to the people who still hang their lives to the universe, especially in fulfilling the needs of daily life gained from agricultural products. The research was conducted in 2018-2020 for the retrieval of field data and literature studies. Data collection is done by Purposive sampling method, the determination of key informant has a lot of knowledge about the management of biological resources, the traditional treatment age (BATRA) over 40 years and has experienced more or less 15 years. Data processing and analysis are done in descriptive and review literature.

3. Researchs and Discussions
3.1. Utilization of biological resources: plants
Local plant utilization is often done by the tribes in Indonesia. Indonesia has more than 1300 tribes divided into 114 tribes in Sumatra, 17 tribes in Java and Bali, 83 tribes in Nusa Tenggara, Kalimantan as many as 406 tribes, Sulawesi as many as 220 tribes, Maluku as many as 126 tribes and Papua as many as 466 tribes [4]. All of these tribes have different things to utilize plant biological resources. One of the ethnic groups in Indonesia is in Bangka Island which is the Jerieng tribe. The Jerieng people have long used plants in various activities, including the construction of houses and indigenous clothing, pegamen or guns, musical instruments, traditional ceremonies (traditional Jerieng rituals), indigenous marriages, as medicine and food alternatives traditionally.
3.1.1 Home construction and traditional clothing
House architecture of the Jerieng tribe shaped stage, the house consists of a rectangular pillar (beam), porch, there is the stage on the left and right, kitchen, roof of the leaf/tile. The typical stage house shape of the Jerieng tribe is made of wood, Bambo, rattan tree roots, and leaves. Wood for pole House, wooden kid for the floor, bark for the wall, and Nipah leaves for the roof. For traditional clothing, The Jerieng tribe was originally made of mashed bark [9]. In its development, this custom is made of fabric and additional accessories such as hats (Tanjak/Kopiah) made of nail-Pakuan resam (Dicranopteris linearis).

3.1.2 Guns/Pegamen
Pegamen or weapons are objects that people use to defend themselves and daily activities such as farming/gardening. The Jerieng's typical weapons are machetes, Lade, and Tulup Bulin. Special for Tulup Bulin made of wood bulins or Nahas wood. Tulup Bulin has a length of 130 cm, by the community this weapon is used to repel the enemy because it includes an old heirloom and has a potent deep power. Santoso & Bahtiar (2016) say the traditional weapon of the areas in Indonesia is used as a tool of daily necessity and some are made especially for ritual activities or traditional ceremonial or dance equipment.

3.1.3 Musical instruments
The Jerieng tribe has a traditional music type of measles and dambus music. This music only uses tools such as drums made of leather Menjawak (Biawak) and Wood, the Ketawak (gong) made of coconut shell, now it is made of iron and violin [9]. According to Cahya [6], The Jerieng people used musical instruments belonging to the Idiophone (instrument as a tool as well as a sound producer) such as the comedian. Next, Membranophone (musical instrument whose source is derived from the skin or membrane that is set like a drum.

3.1.4 Traditional ceremony
Some types of plants are usually used as offerings in the traditional ceremonies Ngacak or Ceriak or Nyimah. This traditional ceremony is intended to summon fairies of hills, mountains, headlands, caves, and large rocks. This Ritual is held by the Jerieng people by presenting the offerings of sticky rice, ketupat, tacak, and grilled chicken. Next, the Nerang Negeri ceremony is done after the rice harvest (ngetem ume). People of Jerieng are required to bring rice crops to be collected and cooked together in the House of Adat chair. After that, the residents get the Pinang rajah and the Taber Pacek by the customary elders. Traditional ceremonies Mulod, Mekrat, Ruwahan, Tujoh Likur and Raye, Sure, Mace Khol, and Sedekah Kampong and Ngitong Arei and Tebus Tahlil are traditional ceremonies set in Islamic settings. In the traditional ceremony, it usually serves food derived from plants such as pulp sure, snacks, cake, dodol, and mushy pancake and lepat. However, some types of plants are used as tools in the implementation of traditional rituals such as coconut (shell), bamboo, rice, sugar, coffee, wheat. The ritual of traditional ceremonies in Islamic setting is a community effort to refuse the Balak to ask for salvation in life, keep away from the disorder of supernatural beings, and ask God for help to avoid harm and so that the land is occupied prospering, safe and peaceful [8].

3.1.5 Medicinal herbs
The Jerieng people's ability to utilize plants and plants as a medicine has been carried out since hundreds of yearly and hereditary. Most of the Jerieng tribe people still use plants as medicine because they are easy to obtain, inexpensive, and do not cause any side effects. The Jerieng people utilize 82 species of plants, the Zingiberaceae family is most widely used as medicine like turmeric (Curcuma domestica), red Ginger (Zingiber officinale), a loam (Zingiber zurembet), a Temulawak (Curcuma zanthorrhizza), galangal (Alpinia galangal), Kencur (Kaempferia galangal) and kelacing (Cheilocostus speciosus). The plant parts are the most commonly used roots with tree habitat. How to process herbs as medicine with the mashed, boiled, kneaded, salai, squeezed, shredded, burned, eaten directly, brewed and steamed. For how to use it with drinkable, eaten, pinned in the sick, ripped, compressed, and sped throughout the
body. The category of treatable is indigestion, respiratory, reproductive, nerve disease. Some types of plants such as *Eurycoma longifolia* and (*Llex cymosa*) are used to increase body stamina. Some reports inform Bangka people still have a good knowledge of the utilization of natural materials such as plants/plants as medicine. Traditional medicinal plants are often used as an herbal medicine based on experience, speech culture, and brainstorm among community members [3].

### 3.1.6 Alternative food

The use of plants as food by the tribe of Jerieng is based on a hereditary culture of speech. Such knowledge includes the way or the process of making food or the processing of plants to be food or cooking. The Jerieng people utilize 79 species of plants as food, the most numerous families of Solanaceae such as cayenne pepper (*Capsicum frutescens*), red Chili (*Capsicum annuum*), Terung ketukak (*Solanum torvum*), Ranti (*Solanum americanum*), Terung gelatik (*Solanum melongena*), potato (*Solanum tuberosum*), Terung telunjuk (*Solanum melongena* var. insanum), Terung ungu (*Solanum melingena* var. melongena), tomato (*Solanum lycopersicum*). The Solanaceae family has economic value and has been cultivated by the Society of food, vegetables, medicine, and ornamental plants (Hariri & Arifin 2018). For the habitat of the highest trees and habitat of the plant many in the garden. People of Jerieng more utilize the type of plant obtained from the garden because it is generally the livelihood of the people of farmers. The most commonly used plant parts are fruit. For the way of plant processing food consists of a direct dish such as fresh vegetables and fruit and dishes that must be processed earlier such as stir fry, stew, pulp, snacks, and coconut milk.

### 3.2. Utilization of biological resources: animals

According to its history, the customary rule of the Jerieng tribe was influenced by animism and dynamism, so animals were often used in rituals as a means of linking with fairies and Jin commanders. This Ritual deals with farming and fishing activities when they are at sea. According to LAMJ [9], The Jerieng people had knowledge of veterinary use either as traditional medicine or food, even in the special ceremony activities of the Jerieng tribe. The utilization of animals by humans has the connection between culture and human civilization with animals that live around it, it is seen from hunting tools, clothing, and motifs on the wall of the cave (Alves 2011). The Jerieng people utilized 21 types of animals for traditional medicine, comprising a group of invertebrate Arachnida classes, Bivalvia, Oligochaeta, and Insecta. For groups of vertebrates, there are classes of Pisces, reptiles, Aves, and mammals. The animal parts are utilized throughout the body, meat, internal organs, outer organs. These animals are utilized to treat diseases such as typhoid, asthma, surgical wounds, itching skin, eye even for those caused by witchcraft.

The ritual activities of traditional animals are also utilized by the Jerieng tribe such as Ngacak ceremony using chicken. Traditional musical instruments of the Jerieng tribe are also made of animal body parts such as lizard skin there are even animal-themed singing such as Kedidi, Ayam Putih, and Cak Murai. The Jerieng Tribe Society has undergone diffusion, causing the process of accommodation (adaptation) to the cultural values of the Jerieng people. The cultured process of the Jerieng culture caused the Jerieng community to be divided into three driving groups, namely the community that incorporated the Government, the customs community, the individualist community that led to the urban community. The process of adaptation of social norms in the Jerieng community does not only affect daily life but affects the form of customary processes in the community of Jerieng [5].

### 3.3. Conservation strategies

The Jerieng tribal tradition of the management and utilization of biological resources should be maintained, developed, and enhanced as a form of local wisdom culture. The transfer of knowledge occurs from generation to generation through inclusion in the activities and culture of speech. Protection and rescue efforts of biological resources should pay attention to the value of local wisdom and the role of the Government, especially the village government. The local wisdom of Jerieng is the myth and traditional ceremony and the role of the Government through the regulation of the village (PerDes).
These two components are expected to provide direction and guidance in the management and preserve the sustainability of biological resources in the traditional Jerieng tribe indigenous order.

The strategy is a plan that is done by individuals, groups, organizations in achieving a particular goal. A conservation effort with local wisdom of the Jerieng people in the form of motivating and encouraging the individual people's awareness of the Jerieng tribe to implement the indigenous Jerieng agenda such as Sedekah Gunung and Adat Ceriak, Sure, and strengthening the role of the Malay customary Institutions Jerieng [6]. Another thing is the myth and belief of the Jerieng tribe community to preserve indigenous forests. Village governments can issue village regulations to protect indigenous forests and impose sanctions on violations [12]. The increased status of indigenous forest Jerieng Menduyung became Natural Park (TWA) by the Ministry of Forestry of INDONESIA in 2016 further strengthening conservation and coordination efforts in the management, utilization, protection of biological resources by the Jerieng people.

4. Conclusion

The Jerieng people kept their customary values and traditions and implemented a conservation strategy in the utilization of biological resources.

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