

# Karo Ethnomedicine Tourism Development: Opportunities and Challenges

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**Abstract:** This paper explains the analysis of opportunities and challenges of how forest biodiversity and traditional medicine from generation to generation become a potential for ethnomedicine tourism that can be developed in Karo District. Based on the results of the field study, to date there have been 185 developers of traditional medicine in the Karo District Health Office. Conventional markets in Karo District also have certain areas where traditional healers gather to peddle their wares. The Karo Regency Tourism Office is currently in the process of discussing the formulation of a 'traditional healer village' in one of the tourism development programs. However, the Karo Regency government also has various obstacles in the development of ethnomedicine tourism related to the procedure for obtaining a business permit and standardization of traditional healers which is still difficult to do for its products and treatment techniques. The procedure of establishing 'village tourism' based on traditional medicine is also still constrained by bureaucracy that is still unclear regulations.

## 1 INTRODUCTION

The Indonesian Ministry of Health has declared Indonesia a destination for medical tourism since 2012. In physical preparation, Indonesia itself has 19 hospitals internationally accredited by the Joint Commission International with a total of 891,897 health workers in 2014. But until 2019, Indonesia still not maximally developing health tourism when compared to Malaysia and India.

Karo Regency is one of the main tourist destination areas in North Sumatra Province which has the potential to be no less interesting than other tourist destinations in Indonesia. Karo District tourism is well known to the people of Indonesia and even foreign people. Karo Regency has many attractions that can be visited such as nature tourism, agrotourism, arts and cultural tourism, and historical heritage tours and so forth.

Seeing the many potential tourist attractions that exist, as well as the arts and culture of the Karo community, it is very natural that the tourism sector is determined as a mainstay in developing tourist destinations in Karo Regency. If all the tourism potentials above are well developed and sustainable, and there is a strong commitment from the Karo

Regency Government and in particular the Karo Regency Culture and Tourism Office will be able to provide great benefits to the local government and the people in the area.

One of Tanah Karo's tourism potentials is very well-known biodiversity, which has been developed as an agrotourism such as oranges, strawberries, Dutch eggplants, coffee, vegetables (cabbage, mustard greens, cucumbers, tomatoes), horticultural crops, flowers, etc. This biodiversity is also an export commodity from Tanah Karo. In addition to cultivation plants for agrotourism, the diversity of biological species in the forests around the Tanah Karo area is also a source of medicinal plants used by traditional Karo communities for generations.

The Karo community itself still uses the traditional medical system. Traditional medicines that are still being carried out and are believed by the Karo community to date include yellow, erpangir, tasteless, oil or carbohydrate, bursts, broken bones, and o adequate or steam baths. Yellow for example can cure diseases such as boils, itching, colds and to obtain offspring. Erpangir is purification by washing or washing the head (shampooing) by using a mixture of various types of oranges, especially kaffir lime mixed with lau meciho (white/clean water) in the lau river

by Sibaso teacher. So is the case with traditional treatment of broken bones which are still used in achieving health.

Karo traditional medicine has also begun to be developed by the Karo people who have also begun to spread to several areas such as Medan and its surroundings. Karo traditional medicine is much in demand by the community, so it is not uncommon for people to visit Tanah Karo specifically to seek treatment at certain places that have special treatment methods such as Malumta, broken shamans, *oukup*, etc. or to buy special medicines such as Karo oil, spray, etc.

The natural wealth and rich traditions of the Karo people are widely known and make the tourism potential of Tanah Karo very diverse and superior, especially the wealth of medicinal plants and traditional treatment methods, so this research was carried out to see how the Karo community's ethno-medical based tourism development model is developed.

## 2 MANUSCRIPT PREPARATION

Until now, Indonesia has not paid attention to studies and issues regarding the development of health-based tourism, especially traditional medicine-based tourism. This study is a new study which elaborates between traditional medicine and tourism development. Based on previous research, much research is conducted around traditional medicine as conducted by Syahrudin Lubis in 1995 showing that there is a lot of knowledge about traditional medicine in North Sumatra (Sembiring, 2011). According to Agromedia Redaksi (2003) the tendency of increasing use of traditional medicines is based on several reasons as follows: (a) the increasingly high prices of manufactured medicines, so that people begin to accept alternative treatments that are cheap and easy to obtain but are no less effective than factory-made medicines. (b) the smaller side effects caused by traditional medicine, even certain types of plants show no side effects at all, and (c) the chemical elements contained in traditional medicine actually form the basis of modern medical treatment.

In addition, according to Katno (2008) traditional medicine is also made an option because it can be obtained, mixed and planted without medical personnel. Traditional medicines that are also obtained from traditional medicinal plants are used and reported empirically by the community to improve health and treatment of various diseases (Santoso, 1992).

Study on Ethnomedicine in Internal Medicine of the Dayak Tabun Tribe in Sungai Areh Village, Ketungau Tengah District, Sintang District, conducted by Wildayati, Lovadi, and Linda (2016) explains that several types of plants have the property to treat the same disease, for example the species *Adenantha povania* (root of canvass), *Eurycoma longifolia Jack* (crank) which is used to treat hepatitis. Plant species that are used to treat more than one disease, for example the species *Angiopteris avecta* (rock nails) that are used to treat tumors and cancer. Plant species that are only used to treat one type of disease, for example *Lasia sp* (snapped ginger) that is used to treat uterine cancer. The same thing was done by the Dayak Desah tribe in Sintang district who used one plant for one disease or one plant for several diseases.

The results of Silalahi's study (2017) on Ethnomedicine Studies in Indonesia and the Research Approach are also seen. Ethnomedicine studies in Indonesia were initiated by Rumphius but until now most have been centered on Java and Bali, while other islands are still few. The results of studies on health tourism so far that is famous is health tourism developed by the Malaysian state which has been built for 10 years. However, health tourism developed by the neighboring country is modern health tourism based on the latest treatment. One of the hospitals that has the largest network in health tourism is KPJ Healthcare Berhad, a member of the Johor Corporation, owned by the Johor government which has been established since 1981. Until now, the group has 24 specialist hospital networks in Malaysia and Singapore, and 2 hospitals in Indonesia, has served more than 2.5 million patients each year consisting of 2.4 million outpatients, and the rest inpatients. These patients come from various countries, and from the 20 most countries that do health care there, Indonesia occupies the first position dominated by people from Sumatra such as Medan, Aceh, Pekanbaru, Batam. Meanwhile, the rest are from other Asean countries such as Vietnam, Cambodia, Myanmar and Thailand.

Furthermore, the country of India is also becoming a country that is developing health tourism which is growing rapidly at this time. The sector in this country has continued to grow over the past five years, reaching 25% of private sector revenues. Every year, around 10,000-12,000 medical tourists travel to India only for health care. It was found that the main motivations of tourists from industrialized countries to choose India include: the high cost of health care in the country, the long waiting time for operations up to several years and health insurance that is not includes selective treatments such as plastic surgery.

In fact, often the health insurance itself also offers medical tourism to patients as an alternative. In fact, it is also colored by the presence of tour packages that include medical care, travel and hospitality and sightseeing services. In the context of promotion, the points of sale that are carried out are very unique, such as cost effectiveness and its combination with tourist attractions, often even packed with traditional therapies and treatment methods. The slogan offered is also very interesting namely "First World treatment at Third World prices." The success of the promotion certainly cannot be separated from the synergy of the sellers of tourism products. Remarkably, India is able to coordinate it well, for example Kerala as a medical tourism destination, and AIMS as a provider of medical treatment.

While the results of a study on health tourism in Indonesia was carried out by Sumaryati (2015), entitled Study of Oxygen Health Tourism Potential in Gili Iyang, because Gili Iyang Island is famous for having high oxygen levels. High oxygen is used as a basis for development and development in Gili Iyang, as a health tourism destination. Checking oxygen levels on Gili Iyang is carried out by several agencies. The results of measurements in the showed that oxygen levels on Gili Iyang were in normal conditions at 20.9%. The fresh air in Gili Gili is not because of high oxygen levels, but because the air is clean of pollutants. If there are measurements from other agencies that show the presence of spots with high oxygen levels above 22%, in fact high levels of oxygen need to be watched out because high oxygen levels can cause oxygen poisoning called hyperoxia and potentially cause devastating fires. The results of this study are still based on the potential and basic studies of oxygen levels in Gili Iyang.

Another study on health tourism in Indonesia was conducted by Rosalina et al (2015), on Opening the Door to the Development of Medical Tourism in Bali, in this study it was mentioned that Bali as one of the top destinations in Indonesia, had also tried to prepare an international hospital. Until now, there are at least 3 hospitals that are internationally recognized, namely the Sanglah Central General Hospital, Bali International Medical Center which also cooperates with Courtyard Marriot Bali and Bali Royal Hospital.

Sanglah Hospital claimed to have prepared quality and service with the focus of Medical Tourism at the Amerta International Wing as a superior program. Some of the steps taken by RSUP include standardization of service quality, competency certification for health workers and increased hospitality so that they can provide maximum service. In addition, the Bali Royal Hospital even conducted a

promotion to Germany in the ITB (Internationale Tourismus-Börse) Berlin in 2013 and 2014 in collaboration with the Bali Provincial Tourism Office. At the event, BROS had the opportunity to launch a prime package specifically made to be marketed in the medical tourism program. There are four packages offered, such as: medical check-up packages, IVF, plastic surgery and orthopedy packages. In addition to having several international hospitals, Bali also has health workers who support the implementation of medical tourism in the future. Expert doctors and medical and non-medical personnel owned by Bali are relatively adequate. In 2013 there were 366 expert doctors and 2,438 medical and non-medical personnel. This situation is supported by the superiority of Bali which has a variety of traditional treatments that can be combined after medical treatment takes place.

### 3 RESULT AND DISCUSSION

Karo is a nation that has existed for hundreds or even thousands of years and inhabits several regions in North Sumatra Province, Indonesia, and at the same time makes one of the names of the Regency in the Karo Plateau, namely Karo District. Some of the areas inhabited by the Karo people in North Sumatra are called Tanah Karo, where these areas include Langkat Regency, Deli Serdang Regency, Medan City, Karo Regency, Dairi Regency, and also to Southeast Aceh.

Karo community is a society that has a high cultural civilization, and this can be seen from the advances in technology and science that have been developing for thousands of years in this area. As proof of this in the Karo area, it can be found in the presence of Siwaluh Jabu or also often called the Karo Traditional House, which is a large and tall house, and equipped with technology to withstand earthquake shocks.

In addition to the existence of a traditional house, the Karo community has also been familiar with the culture of writing since hundreds of years ago. That writing in general can still be seen on sheets of ulim bark called Pustaka Laklak, the writing with the character of Karo. Through the Laklak Library we can find various writings, namely about prophecy (katika), turi-turin (story), mangmang/tabas (mantra), the book of abortion, lamentation (sayings), we mayan (martial arts), ndung- ndungun (pantun), as well as medicinal herbs. Specifically regarding the existence of writings on the book of medicine, as well as the ingredients of medicines that can be found in

the Laklak Library, indicates that the Karo community has traditionally developed medical science since hundreds of years ago.

### 3.1 Types of Traditional Karo Treatment

Karo traditional medicine, which in Karo is called Tambar Kuta, is a traditional medical practice that has developed for hundreds of years in the Karo community. The treatment practices include herbal medicine, acupuncture, sauna bathing (*oukup*), and so forth.

Although the existence of traditional Karo medicine has been known for generations by the Karo community for hundreds of years, but in reality so far it has not been too popular among the wider community. The lack of popularity of traditional Karo treatment is not because this treatment technique is not effective in treating diseases. The Karo community has a medical philosophy of "Lit Can Lit Tawar" which means that there is a cure for every disease. In accordance with the sex of the community members and also the age level, these drugs can be divided into:

1. Tambar Danak-Danak "Obat Anak-Anak"
2. Tambar Pernanden "Obat Kaum Ibu"
3. Tambar Perbapan "Obat Kaum Bapak"
4. Tambar Sinterem "Obat Orang Banyak"

### 3.2 Tambar/Tawar in the Karo Medical Tradition

Tawar Karo is a traditional medicine that is useful for curing various types of minor ailments. Bargaining itself has the meaning of medicine or herbal medicine. The existence of bargaining as a medicine has been passed down by the Karo tribe from generation to generation. Even in this modern era, the existence of bargaining as a family medicine is still widely used by the Karo community.

Bargains are usually made from basic ingredients of rice flour mixed with various spices. The method of making it is quite simple, by smoothing the available concoctions of spices. After the spices are finely ground, then mixed with rice flour, and then moistened with water.

A mixture of fine spices and rice flour that has been moistened and then mixed evenly. After the stirring process is complete, the mixture of spices and rice flour will look like cake batter. The dough in the form of the dough is then rounded to the size of a marble, and after the finish is rounded then dried.

After the drying process is completed, the bargaining is ready to be used to treat various types of diseases, such as itching, mild fever, aches, colds, stomach ailments, and other minor ailments.

How to use bargaining itself can be done in two different ways, namely the first way to mix the tasteless with white water, then applied to the itchy part of the skin. This is also done when bargaining is intended to treat mild fever, which is smeared on the head, in the abdomen when catching a cold, and smeared bargaining on the stomach when catching a cold. How to use both bargains can be eaten immediately and it is intended to treat various internal diseases, such as gastric disease and so forth. Usually tasteless as an alternative medicine, can be easily found in various traditional markets in the Karo area, such as the Pancur Batu market, Kabanjahe, Berastagi and also in the Tigabinanga market.

### 3.3 Minyak Alun (Alun Oil): Typical Tanah Karo in Medical Traditions

Sorting or in Karo language is the square is a traditional treatment method which is also known in English as massage. Especially for the Karo community, the method of treatment by massage has been known for generations, and is applied to cure various types of diseases.

In general, the healing of diseases that are often done by the Karo community by massage is when there are parts of the body that feel achy and tired, body parts are dislocated, catching cold, and even the massage method is also applied to married couples who have difficulty getting offspring.

Particularly for the recovery of the body's freshness from fatigue at work and colds, in general there is a specific massage oil that is often used by the Karo people for generations from their ancestral heritage. The sequential oil known as cooking oil has been passed down from generation to generation for hundreds of years, and is still preserved by almost all people, especially for those who live in rural areas, not even for Karo people who live in the city.

So far there are indeed many types of Karo-specific massage oils and are produced through home-based businesses. However, some of the massage oils have also been produced more professionally, one of them is for example the Kemkem massage oil for example.

The existence of herbs that have been processed to become massage oil so far is indeed still a secret. But in general, the herbs used for the production of massage oil are made from various spices typical of Karo and are generally obtained from leaves, stems



and roots of shrubs, and also trees that grow in the middle of the forest.

The existence of increasingly narrow forests today, makes the existence of special Karo oil-making materials in general already very difficult to obtain. To anticipate this shortage of raw materials, some of the oil producers have sought alternative sources of raw materials, namely by trying to cultivate tanamban of these raw materials in the garden and also in their home yards, where the existence of these plants will not be recognized by someone who lay.

Even though the existence of Karo-specific massage oil has been a part of the life of the Karo community since hundreds of years ago, and even today it has also been used by people outside the Karo community, but its existence has not yet been medically investigated, so the potential existence of this local alternative treatment should be touched by even more harsh handling. Scientific research and coupled with increasingly modern packaging, will certainly be able to boost the existence of massage oil becoming more widely accepted among the public.

Certainly it would not be impossible if the existence of sequential oil is managed more professionally, then the existence of Karo serial oil can also be one of the Tanah Karo brand images that can be widely accepted by all people of the world.

### 3.4 *Oukup*; Traditional Karo Sauna

*Oukup* is a traditional sauna bath typical of the Karo tribe that utilizes various types of plants as a concoction. This sauna bath is beneficial for the health of new mothers, and is believed to be able to treat various types of diseases; such as blood sugar disease, rheumatism, gout, and so forth.

In general, the *oukup* method is very similar to a sauna bath that is commonly found in beauty houses. But the thing that distinguishes it is enough to use the special ingredients of Karo to produce a refreshing aroma which is then efficacious for healing diseases.

In addition to being able to cure various types of diseases, when doing therapy, the body will ooze a lot of sweat and this will make blood flow. In addition, this typical Karo sauna is also efficacious to eliminate body odor, and eliminate fat in the body.

The existence of *oukup* which has been known for generations by the people of Karo, and was previously done by cooking water accompanied by various herbs. After the water boils, then removed and put in a container in the form of a bucket. The bucket is then placed under the chair, the person who is going to do enough therapy then sits on the chair

while wrapped in a blanket, so that hot water vapor from the bottom will force sweat out. Along with the release of sweat when doing enough therapy, it is useful to remove the remaining impurities from the body, as well as make the body healthy.

At present the existence of *Oukup* has been commercialized. Various *oukup* houses can be easily found, especially in the city of Medan. Along with *oukup*'s increasingly widespread commercialization, the processing of spices has also been modernized. The existence of spices has been boiled in a special container, from the container will be connected with a pipe to the *Oukup* room. When the spices are heated, then through the pipes will be channeled water vapor that heats the *Oukup* space.

The adequate room is usually designed closed, so when someone enters it will feel the hot steam, while to breathe while taking a steam bath, the client will get fresh air through a small hole provided in the wall of the room which also serves to prevent excessive perspiration.

Although so far there has been no official medical research which states that it is quite beneficial for health, but its existence is growing because of relatively high demand. From some of the information obtained, at least in Medan currently has around 60 institutions scattered in various places.

### 3.5 *Kuning Melas* Karo Traditional Medicine

Yellow is Karo traditional medicine which is used in healing diseases and health care. In the Karo community various types of yellow are known and one of them is yellow weld. This drug has the properties of melas or heat because it is made from basic ingredients such as ginger, pepper, kencur, onion and garlic. The use of yellow melas is usually used to warm up and restore the body's freshness.

Besides being used to warm and restore the freshness of the body, yellow welds are also used so that users can sleep soundly at night. Especially for children with yellow melas, it is also beneficial to be asleep, and to prevent urination during the night.

The materials used in making yellow melas are grouped into several parts, namely the group of herbs that are purchased, the group of herbs of plant leaves, groups of plant flowers, and other groups of ingredients. The ingredients for making yellow melas consisting of various groups, among them are as follows: Ingredients needed: Ginger (1 ounce), pepper (1 ounce), *kencur* (1 ounce), shallot (1 ounce), garlic (1 ounce). Herb leaves: scales of dragon scales (six strands), *ukat-ukat* leaves (six strands), *calung-*

*calung* leaves (six strands). Herb flower pot: kiung flower (handful), hibiscus flower (six sheets). Other ingredients: *pulut* rice (1 kg).

The method of making yellow melas starts from first cleaning the materials purchased and then ground until blended. Likewise with materials that are classified as leaves and flower plants are cleaned first, then ground until blended. The materials that have been ground are then mixed with rice flour, stirred evenly and then printed in a round shape and in the sun.

To use yellow, this can be done by applying smear to the body or eaten. Before use, the yellow is first thawed using cold water, then applied to all parts of the body. Yellow can also be eaten directly for the treatment of diseases and health care from the body.

### 3.6 Karo's Ethnomedicine Tourism: Opportunities and Challenge

The Karo District Government currently in the development of tourism has a program related to regional arts through the preservation of the original Karo traditional clothing which is currently often modified so it looks modern. Likewise with traditional dances which are considered today no longer reflect the actual Karo regional dances. The Karo Regency Tourism Office is currently trying to coordinate and collaborate with the Karo Regency Education Office in the preservation of the Godang arts culture. The planned program is carried out in the form of Godang extracurricular activities in schools in Karo District.

The Department of Tourism is also in the process of preparing a procedure for submitting a Tourism Village and Medical Village from the Karo District government to the central government. It is hoped that through this program, the development of traditional Karo-based tourism can be carried out. This program is constrained because the operational and technical guidelines for the selection and formation of the Tourism Village have just been completed by the central government in 2017 since 2015 this program was announced.

The Health Department has conducted data collection and mapping of traditional healers in Karo, but has never made a meeting or coordinated with regard to traditional healers in the development and preservation of traditional medicines. There are 124 Traditional Medicines in the Regency consisting of physicians or drugstores, fracture experts, rib therapy and steam baths (enough), etc. The Health Office also experienced human resource shortages and the lack of human resources who understood traditional

medicine, so the Health Office only did mapping and data collection.

The Karo Regency Industry and SME Office has conducted socialization activities related to the management of traditional healers' business licenses. Until now there are only 3 drugstore business licenses registered at PTSP Karo Regency. The constraints faced by traditional healers in the administration of business licenses are related to the composition of traditional medicines that are formulated, and the names of the ingredients used are unknown. This happens because of the lack of knowledge of traditional healers associated with the names of plants that are used as ingredients for medicine. They usually know the name of the plant only in the Karo regional language, do not know the name of the plant in Indonesian let alone in the scientific language of biology.

In the development of tourism, the Karo District government does not yet have cross-institutional coordination. Each institution runs it separately, so that some programs seem interrupted and unrelated. Regarding the development of ethno-medical tourism based on Karo healers, there is still no coordination and communication between related institutions.

## 4 CONCLUSIONS

Health is something that is expensive in human life because if the body is in an unhealthy state then the activities of human life cannot run smoothly. Therefore, humans do several ways to maintain health, for example by modern or traditional methods. In health care, there are times when done through modern and traditional methods side by side. Health management through traditional methods is considered to have smaller negative side effects when compared to modern methods because traditional medicine uses natural ingredients.

Traditional medicine is often called traditional medicine (folk medicine). Traditional medicine (folk medicine) is a way of treating diseases related to the culture of an ethnic group that inhabits a certain area. The addition of the traditional word to traditional medicine is related to the way the disease is diagnosed (disease analysis) and the treatment is carried out such as: who does it and the material used as medicine.

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