

NATURAL RESOURCES AND LOCAL COMMUNITY: THE CASE OF JADE PRODUCTION AND LOCAL COMMUNITY IN LONEKHINN-HPAKANT JADE MINE AREA, KACHIN STATE, MYANMAR

Hla Hla Kyi

Department of Anthropology,

University of Mandalay, Republic of the Union of Myanmar

ABSTRACT

The aim of this paper is to explore jade production affects on society and natural environment in Lonekhinn-Hpakant Jade Mine Area, Kachin State, Myanmar. Lonekhinn-Hpakant Jade Mine Area is the largest jade production area in Myanmar, many people come and work in this study area. Besides, Jade Companies use modern technology and machines to search for jade. Therefore, use of modern technology and machines affects on natural environment. To achieve the aim of this study, qualitative research method was used. KII (Key informant interview), participant observation, FGI (Focus Group interview) were employed to get the data. As a result, this paper indicated that jade production can provide the social welfare in society but not in natural environment and natural resources.

KEY WORDS

jade production, technology, natural environment

INTRODUCTION

Every society has to manage natural resources for their subsistence. There are three types of resources namely; human resource, natural resource and man-made resource. Among them, some natural resources are not renewable. If the people exceedingly utilize natural resources by only a single economic outlook, the natural resources will drop dramatically within centuries. Man's actions make changed the fundamental balances in nature. For example, cutting down forests can change patterns of rainfall and cause serious erosion; the use of chemicals and firearms can kill off species of animals and birds that have survived for millions of years. Besides, global warming and climate change are also not exceptions. Therefore, we should examine the relationship between utilizing natural resources and local community. The aim of this paper is to explore jade production affects on society and natural environment in Lonekhinn-Hpakant Jade Mine Area, Kachin State, Myanmar.

The term 'Jade'; literally means green stone or Kyauk-sein in Myanmar Language. Chinese word for jade is "yu". English word "Jade" is derived from a Spanish word "ijada" which means the stone that cures the kidney disease. Greeks called "kidney stone" because they discovered that it cures the diseases of the kidney. In the world, jade is found in Myanmar, Yunnan, Tibet, Mexico and South Africa. In Myanmar, jade is found in ten Uruvillages (ten villages of Uru) of upper Chindwin, Hpakant, Tawhmaw, Putao, Mawhan of Kachin State, Mawlu of Indaw Township, and Khamti of Sagaing Division. Hpakant Township is the largest jade production area and local community's economy is based on jade business. But jade is the nonrenewable natural resource if jade is over production, it needs to consider the effects on the natural environment and local community.

RESEARCH AIM AND OBJECTIVES

This research aims to point out the jade production effects on society and natural environment in Lonekhinn-Hpakant Jade Mine Area, Kachin State, Myanmar. The objectives are to explore jade business effects on local community in the study area and to elicit how jade production affects the natural environment in the study area.

RESEARCH METHODOLOGY

The research method is qualitative research method. Research tools are key informant interview, participant observation and focus group interview. The population of the research is natives and migrant people in the study area, administrative people, business people, merchants, company's working staff, brokers and "yemasay" (waste stones) jade stone searchers. Research participants are 124 persons in Lonekhinn-Hpakant Jade Mine Area. Research data is collected from March, 2010 to March, 2013.

DEVELOPMENT OF JADE TRADE IN MYANMAR

In early times, the discovery that green jade of fine quality occurred in northern Burma (Myanmar) was made accidentally by a Yunnanese trader in the thirteen century. In the 14th century, the Yunnan government made efforts to find jade in the area, but was not successful. Only in the late 18th century did Sino-Myanmar jade trading begin. On 29 November 1885, the Upper Myanmar Kingdom was annexed by the British. Myanmar was ruled as part of India by the British and military rule was declared until 1897 (D.P.S.L Ghals 1980). Every year under the British Colonial Government, the British Commissioners of Sagaing auctioned off the jade mines and collected the revenue from the jade trade. In the Colonial

Period, only the Kachin Du was (Tribe leaders) had been collecting taxes in jade mines. When the Second World War broke out, all the jade mine businesses had come to a stop, starting from April, 1942. After the Second World War, the borderland administration department made efforts to re-open the jade mines. Most of the jade that had been bought by Chinese merchants carried the precious stone to Yangon and from there sent it by ship to Hong Kong or some other Chinese ports (Arnold Wright & Others 1910). On 4 January 1948, Myanmar became an independent country. The Myanmar government made preparations for the Province and Mainland developments. The Vice Consultant Minister Sama Duwa Sin Wa Naung of Kachin State Borderland Administration Department made efforts to re-open jade mines so as to solve the unemployment problems of the local people of Myitkyina and Bhamo and to raise the standard (Jade Manual 1950). Although Myanmar jade had been recognized as the best of its kind in the world, only the Chinese had cherished jade in East Asia, and so the principal market had been in Shanghai, China, before World War II. After World War II, Hong Kong had become the principal jade market. However the real customers purchased jade through such countries as China, England, France, West Germany and USA. So Myanmar, the original source of jade, and the customers of other countries had been exploited by the jade

merchants of Hong Kong. Moreover, the jade was purchased for a bargain, and there were also malpractices in foreign exchanges, thus causing losses to the country. So Myanmar entered and participated in Foreign Trade Fairs for selling Myanmar gems in the Myanmar market, and direct contacts were made through trading missions to other countries. Thus, offers were received to come and visit Myanmar on trading business (Myanmar Gems Exhibition Report 1964). On 11 April 1964, the export of Myanmar gems was privatized, and measures were taken to lay down the guidelines for systematic trading of gems. The jade trading business was undertaken by Myanmar Mining and Mineral Extension Corporation since 1964. Thus, with the efforts of the Myanmar government, through jade production and trading are towards the progress of the economic sector of the state. After 1988, Myanmar Government licensed individual private jade miners for jade excavation and trading. During these years, jade excavation's technology developed. So, there are over 500 jade companies in Myanmar 2008. Moreover, Myanmar gems organization began on 1 August 2007. There were 2517 members in this organization in 2009. Gems exhibition had been held 80 times from 1964 to 2010. Today, the world's jade market has found way into Myanmar. The following picture shows the motto of ministry of mining.



Figure 1. Motto of Ministry of Mining.

Table 1. The jade production of nationwide and Lonekhinn-Hpakant Jade Mine Area.

Year	The national production (Jade tons)	Lonekhinn-Hpakant Area's Jade Production (tons)
2000- 2001	11096	5942.1
2001 –2002	8174	6915.94
2002 – 2003	10879	9296.76
2003 – 2004	10754	9479.83
2004 – 2005	14987	12702.13
2005 – 2006	20005	16816.78
2006 – 2007	20458	17183.42
2007 – 2008	20266	16149.56
2008 – 2009	32921	19317.71
2009 – 2010	25795	23014.08
2010 – 2011	34554	19401.95
Total	209889	156220.26

Sources: Weekly Eleven Journal (11.5.2011) and Township Administration Department 2009.

The above data shows the nationwide jade production and the jade produced in Lonekhinn-Hpakant Jade

Mine Area. This data points out that during 10 years nationwide productions are 209889 tons and Lonekhinn-

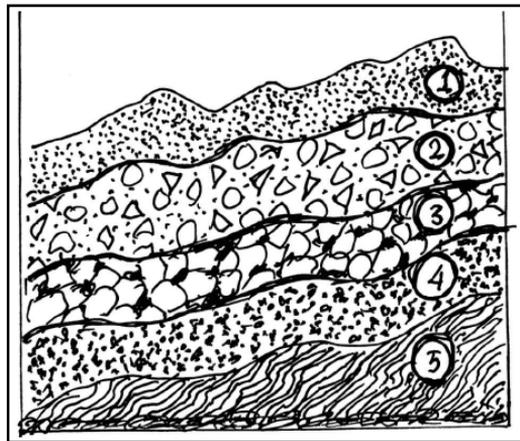
Hpakant Area is responsible for most of national production. It can be understood that the higher jade consumption has been followed by greater jade production.

JADE PRODUCTION METHODS

There are five layers in jade mine. The first layer is the silt layer.

The second layer is called “Cut Kyaw” (gravel bed layer),

which is tightly filled layer of small stones and pebbles. Underneath this layer is the third layer called “Kyauk Kyaw” (jadeite layer). It is in this layer that you first begin to see small jade stones. The next layer is the fourth layer of sand stone (sand layer) that you can also find natural jade stone. In the lowest fifth layer called “Pha” (bed rock), there is no jade to be found, so the digging stops at the fourth layer only.



1. First Layer = Silt Layer
2. Second Layer = Cut Kyaw (gravel bed layer)
3. Third Layer = Kyauk Kyaw (jadeite layer)
4. Fourth Layer = Sand Layer
5. Fifth Layer = Pha (bed rock)

Figure 2. Jade Mine Layers.

TRADITIONAL METHODS

There are three types of jade production; earth pit, water pit, and sluicing. These methods were used in the past before 2000.

The earth pit; as soon as the cold season harvest of paddy is done, the miners start digging the pits for jade production. They need at least 3 to 5 men. They start first with the earth pit.

It is like digging a pit for the toilet. They use the spade and mattock to dig the ground. Two people dig the earth and one put the loose earth into a cane basket to the top. Two more persons on the surface carry away this loose earth. The pit sides have no wooden dykes. So there is the danger of the pit walls breaking down on the pit diggers and burying them. They stop digging to the "Pha" (bed rock). Finding bed rock is the sign of no jades. Therefore they need to stop the digging.

The water pits are in Uru stream and Mawwon stream, Hpakant Gyi stream, Whey kha stream, and their rivulets. They start digging when the water level is low in the streams in Tazaungmone (November) and Nattaw (December) months. They put down sandbags into the stream. Then they have to build a dyke with bamboo walls tied to bamboo poles filled with stone posts. The sandbags are piled there and reinforced with the earth, so that water will not flow into the production area. The water in the mine has to be scooped out with bucket. And then dig the earth and search the jade stone.

Sluicing is done only in the rainy season when there is a lot of water. They have dug the earth from the site with iron spades and mattocks. They have to build a water tank at the head of the sluice. When

the water is full, they open the water gate and the force of the water washed away the dug up earth and stones. Then they look for the jade stone. This method is a less costly way of searching jade.

The above traditional methods show that jade production in the past was a very difficult and risked for jade workers. Besides, because of using human labor it needs long period to find out jade.

MODERN METHODS

After coming of jade companies, especially after 2000, the people use dynamite to break the "Pha" or dig the earth with backhoes, bulldozers and find more varieties of jade stone. Today, for doing water pit they divert the flow of stream and dig backhoes. For sluicing they build wooden stage and they put the dug earth and then wash it with water pump and find out the jade. Every season the people try to dig the jade as much as they can by power of digging machines. Nowadays, in Lonekhinn-Hpakant Jade Mine Area, there are altogether 630 companies; private, co-operative, and state-owned. Jade mining is spread over 17718 blocks, and uses 1032 backhoes, 38 bulldozers and 2112 earth-removal trucks (see figure.3)



Digging jade mine hole



The earth pit



The water pit



Sluicing



Waste loose-earth being dumped

Figure 3. Digging jade mine.

TYPES OF WORKERS

There are two types of workers; (1) the workers who are paid once a month, (2) the workers who search for Yemasay (waste stone) jade stones. Yemasay means jade recovered from the waste mound of loose earth which has not been washed with water yet. The first type

is company workers and the second type is those who live and work with the rich entrepreneur.

The workers are migrants from all other regions. Most of them are young from 16 to 30 years old. When they reach there, they work as drivers for the company cars and working machines like the backhoe,

or go to the mines to search for jade stone. In the past, the workers and self-owned rich entrepreneur equally shared what they got the valuable jade stone from the mine. But nowadays since the coming of the companies, most of workers work for jade companies with monthly paid salaries. A (32) years old worker said:

"I have been here for (10) years. When I first arrived, there were only a few companies and the self-owned rich entrepreneur called "lawpans" who runs a manageable scale of private mining. He hires men to work in his mines on a sharing agreement. The lawpan takes half the sales and the other half is shared by the workers. The lawpan gives money for the workers every week on Sundays to buy the foodstuffs like lentils, dried fish, potatoes, and sardines. The lawpan also provides them with sacks of rice, clothing and shelter. Later the companies came to work on the sites by paying taxes to the government. After that I became a company worker. I get the monthly salary now. Whether the company gets the jade stones or not is no more our concern".

The company workers and Yemaay (waste stone) jade searchers are mostly farmers who came up to

Hpakant to supplement their livelihood of farming which provides them with just sufficient food. The companies and rich entrepreneur take care of the accommodation and food, so that there is a full saving for the family.

THE JADE BUSINESS AND LOCAL PEOPLE

The major economy of Hpakant Township evolves around the jade business such as mining, trading and dealing. Those who are not involved with trading earn their living at hardware stores, fuel pumps, tea shops, stores, restaurants, electrical goods stores, motorcycle repair shops, betel dumplings shop, and stone cutters. Therefore it is known that there are many people who are not directly involved in the jade mining business but whose occupations are dependent on it. As the jade business grows, the standard of the people there is raised all round. The faster the goods flow, the greater they could spend and the higher the living standard gets.

In education sector before 2000, most parents concentrated on their economic activities only, while most mothers, because of their housework and taking care of parents, could not pay much attention to the education of children. The majority of boys on entering adolescence (7/8 Grade in schooling) dropped out to begin jade mining or broker's 9 business. After 2000 with the advent

of jade companies residents in the area gain through mass media a lot of general knowledge, including educational services at various levels. They realize that education is a sound foundation for their children's future, especially as it can facilitate their approach to government departments on business. The rich families send their children to big cities as boarding students, and parents with lesser means still enroll their children in Basic Education High School (Hpakant) or Basic Education High School (Lonekhinn). Therefore, parents are found to be prioritizing their children's education.

In health sector, Lonekhinn-Hpakant jade mine area before 2000 enjoyed little health care because of difficult communications, unstable security, and scant general knowledge, it is learnt. Hpakant town has a Township Health Hospital and Township Health Department. Lonekhinn village has a Station Hospital and Rural Health Centre. Moreover there were few public health personnel. After 2000, their health care services are being reinforced by activities of Maternal and Children Welfare Association, Red Cross Society, and a social welfare society. Besides, the locals are found to be going to Myitkyina, Mandalay, and Yangon for health care and medical treatment. According to the findings, it is evident that the locals have come to enjoy a growing income, whereby families are found to put emphasis on their health care.

For food before 2000, the majority of locals had three meals (cooked rice & curries) daily. For morning breakfast, most of the family members together have cooked rice and curries, Shan noodles, steamed glutinous rice (paungtin) and pounded glutinous rice (khawpoat) all prepared at home or locally made delicacies. For lunch and dinner, the family members have to do prepare them in their home. After 2000 with the advent of jade companies to do jade mining the communications improved to allow import of many kinds of foodstuff. Restaurants and tea shops have since increased and most men usually have morning breakfast at the eateries, some of which are known as *Mibagonyeetea* shop, *Mon* dining shop, *Mogaung* Restaurant, Thai-style chicken and rice shop, etc. After 2000, a commercial deal has been made the relevant parties and departmental personnel feast together at a restaurant. Some family members want to relax by way of eating at restaurant in the evening. But vendors and working class people usually eat at home.

According to the findings, the restaurateurs are making their fortune based on the patronage of traders, brokers, rich families, and their guests. Moreover for older people's nutritious consumption Ovaltine, milk powder, tins of cookies, Knorr brand rice gruel and Brand's chicken essence, etc are available. Those foods mainly feature among the offerings presented to the older

persons on days of religious significance. Besides, children have 10 various snacks to choose from. So, breadwinners-vendors, merchants, and brokers are found to especially take care of parents and children in food matters. According to the finding, it is evident that the resident peoples' income increased.

Kachin State borders on China, so Chinese-made warm clothing, blankets, and textiles in abundance are on sale at Jade Mine Area. In dress before 2000, most of the local people (adults or children) wore clothes made at a tailor's shop, often bringing along pieces of cloth. Dress designs were ordinary and unattractive. Thanks to prosperous jade business after 2000 with better communications, readymade garments of various brand logo's, for man's, woman's and child's wear. All kinds of goods, expensive or inexpensive, to suit all strata of society are found to be on sale. Therefore, it can be found that dressing style of native people and migrant people use readymade fashion style. Therefore, their life expectation shows dependent on their economy. By using materials, there can be seen their social standard and prestige. Out of these, expensive items are bought by businessmen's families and less priced items are bought by working class people and stall-keepers for their consumption.

Mostly forested Kachin State is favorable to house construction as a lot of timber and bamboo can be produced. Most of jade workers'

houses have thatch roofing and bamboo matting walls, with plank flooring. Dependent on their income, the rich men build brick buildings. After 2000, their house was decorated aluminum-roofed, with stainless steel tubing and fabrications. Most locals make an agreement with a contractor to build a house. They possess inside the houses are television set, speaker, stand fan and water cooler which show the growing living standard of its owner. Similarly, vendors and working class people build iron sheet-roofed, with plank walls and flooring. Inside their house has at least a television set for easy viewing and relaxation. For this reason, it can be said that both their housing style and lifestyle are found to have changed. By using materials, there can be seen their social status and prestige, because of better economic situation.

In the family setting, before 2000 a housewife does cooking and looks after parents and her children. Her other chores are concerned with relatives and social events of the locality. Her husband, household head, only was responsible for livelihood of the family. After 2000, companies do the mining with sophisticated machinery leading to more varieties of jade mined and a larger jade market. At the time, the housewife becomes involved in jade business with her husband. That is the improvement of their family's fortune. With the increase in family income, the housewife's role in the family has changed and income

structure also changed. Besides, the siblings after their marriage may live in separate residence or together with parents; they are often engaged in the jade business in unity. This attitude shows affection and unity existent among siblings.

Because of jade mining the lifestyle of local and migrant people has changed; especially the basic needs in regard of food, clothing and shelter, education and health have been fulfilled. Moreover, the family life of the vendor, merchant, broker, yemasay stone picker and the rich has changed: namely shop keepers gain great benefit by selling more crops, garments and consumer goods to an increasing population of company personnel merchants and brokers have more business and consequently more profit after 2000 than before 2000 because of more categories of jade mined; yemasay stone pickers are enjoying a higher living standard for obtaining jade. It can be found that lifestyle of locals and migrant people have been changed educational knowledge, family health care, food, clothing and shelter.

JADE BUSINESS AND NATURAL ENVIRONMENT OF STUDY AREA

The Kachin State has a hot humid climate with plenty of rains. Hpakant region is flooded in the rainy season, with the mountain streams flowing into the rivers. In the past, jade mining was used simple tools

and simple technology. So, the natural environment remained almost intact. Nowadays, the companies begin to dig the jade mine. The self-owned rich jade entrepreneur who mined jade from a manageable plot of land has vanished. Jade Companies work in the cold season and the dry season. In the cold season, this flooded stream is dry and becomes a motor road. They built a dam across the stream to divert the river water. These companies have made the mountains bald in their search for jade. Their use of modern machines such as bulldozers, backhoe, cranes, hydraulic attached ten ton cars, diamond drills and machine toothed spades have left hollows like ponds and lakes. Again the earth gravel they dig up from the pits is thrown away in mounds becoming mountains again.

Along the mountain ranges the natural streams and water holes also became blocked and damaged. As time passed, there was scarcity of place to dump the gravel. So they began to dump the gravel near the Uru stream which used to be 150 feet wide, but now it is only about 3 feet wide in Monywa. Though the Uru stream is narrow in the summer, in the rainy season, it is filled with rains and mountain streams, flowing rapidly carrying away houses and human life.

In July 2009, it rained heavily in Hpakant, causing landslides and floods (The Voice Journal, 20.7.2009). Besides July 2010, it rained heavily in Lonekhinn village

tract, causing floods (Township Administration Department, 2011). Observing the above factors have shown that doing jade mining by building a dyke across the stream causes the banks to be infirm. There is a Myanmar saying, “The climate depends on the forest”. The Kachin State is a mountainous region with heavy forestation. But the mining company’s machines have shaved the mountains bald. It has definitely caused climate change in the region. Man is to blame for this desecration of nature. Jade mining has led to frequent occurrences of loosening soil and floods (see figure 4).

Before 2000, jade mining was carried out according to traditional so there was no too much ecological damage. After 2000 with their entry, the jade companies acquired state owned pieces of land off the map so that large pieces of farmland owned by locals came to be included among that land for company’s mining work. A former farmland-owner now aged 70 said:

“Now I have retired for old age and a surviving with my

children’s support. I lost 13 acres of my farmland to the company but was paid kyat 200 lakhs in compensation. Added with contributions from my children, I have built for myself a brick house building at a cost of nearly Kyat 400 lakhs.

The above facts show that though the farmers have lost a great deal of agricultural land, their living standard has risen to be found. Moreover, their lifestyle according to jade business also has changed for this major resource being exploited through the use of modern machine.

Most of the old people over 70 years, who lived in Hpakant jade mine area said that: Compared to when they were young, the climate has become worse. The forests have been destroyed, diverting the rivers and streams and blocking the natural spring and water holes. It has made the weather extremely hot, and when it rains there is so much water and hailstones, it makes their life uncomfortable.



Figure 4. Flooding and Earth loosening in Lonekhinn village tract.

DISCUSSION AND CONCLUSION

The Lonekhinn-Hpakant Jade Mine Area is, for its jade mining and related businesses, an economic centre for a large number of people come from all across Myanmar. This jade bearing area stands as a place which can provide for the living needs of local people as well as the migrants. In the past, in Lonekhinn-Hpakant jade mine area, simple tools and simple technology were used in jade mining and a little variety of jade was obtained. But the natural environment remained almost intact. Nowadays with the use of modern machines in jade mining a great variety of the jade stone has been obtained, adding to State revenue. But the natural environment has been damaged in the process. The jade mine was marketed, leading to an increase in family's income; a great deal of jade mining done has caused deforestation, which in turn is causing climate change. So the mountainous wooded Hpakant is becoming a waste land.

The authorities should be aware of it and give educational talks on the dangers and preservation of natural resources of forests and water resources. The present jade production site has only a decade left and as it is a nonrenewable resource, the jade production should carefully be measured for long-term benefits to man and nature. If this natural resource is not safeguarded, the lives of the people of the region as well as

Myanmar people who depend on this jade trade for their livelihood will be threatened. Therefore measures must be taken to preserve both the environment and the peoples' livelihood in jade business.

Jade, which is the natural resource of this region, is the life-blood of the local people of this region. Jade mining and jade trade, their natural livelihood, provides them with man's greatest need of food, shelter and clothing. It also raises their standard of living. It has also helped people who come from the other regions for the extra earnings they need. If they are lucky to pick up one valuable stone, the fortune of an entire household to be able to live a better life comes within reach.

The government of Myanmar has been able to have Gems Emporiums not only in the country but also penetrate the world markets by its international shows. Myanmar gems and jade are known worldwide today. As the demand increases, the production is beginning to harm the environment. It is therefore important to be aware of the damage and find the way to prevent this natural disaster to man and the environment.

RECOMMENDATIONS

1. Jade, a nonrenewable resource should be mined within limits and control for jade mining. Otherwise this natural resource will be used up.

2. The natural environment should be retained in so as to benefit the locals dependent on jade mining as well as the future life of the migrants.
3. To help prevent landslides and floods and jade production association should be organized systematically with the locals.
4. In Lonekhinn-Hpakant Jade Mine Area, local and migrant people's lifestyle and jade business should be done not only qualitative but also quantitative research.
5. Further research should be done to how the local people and migrant people lifestyle will be changed in the future.

BIOGRAPHY

- Arnold Wright & Others 1910,
Twentieth Century
Impressions of Burma Loyds
Great Britain Publishing Co.
Ltd.
- Ghals D.P.S.L., 1980, The annexation
of Upper Burma, Eastern
University Press.
- Jade Manual, 1950, Yangon
Government Printing.
- Myanmar Gems Exhibition Report
1964, Yangon Government
Printing.
- Township Administration Depart-
ment Report, 2009.
- Township Administration Depart-
ment Report, 2011.
- The Voice Journal 20.7.2009.
Weekly Eleven, 11.5.2011.