

## **Hunting activities and forest management of the Udeghe people in Krasnyi Yar in the Russian Far East**

Shiro SASAKI

National Museum of Ethnology, Osaka, Japan

### **Preface**

Deforestation is one of the more complex problems faced in the Russian Far East, especially in areas inhabited by indigenous people. It deprives them of their traditional territory for hunting, fishing, and berry collecting, and plays a specific role in the process of the collapse of their culture and society. However, at the same time, they know that the timber industry provides them with work and monetary income, and that timber production is indispensable for improving the economy of Far East Russia. It is necessary to discuss the compatibility between economic activities and the environment in many cases, while one more element should be added to the discussion: the indigenous people's rights in the territory and the conservation of their culture.

The territories of the indigenous people are generally located in very remote areas, where, more precisely, they were pushed out to and compelled to live. Historically, as described later, the entire Russian Far East was their homeland. For example, the Tungus-speaking people (ancestors of the Evenks, Nanais, Ul'chi, Orochi, Udeghe, and Negidals), the Mongolian-speaking people (the Daurians), the Nivkhi people, and a few Ainu lived along the Amur River until the 1840s. Though there were a few Chinese people, there were no Russians present at that time. The colonization of this region by the Russians started in the 1850s. One can characterize the modern history of the Russian Far East as that of deforestation and destruction of the indigenous people's territories, as well as the history of the development and progress of the region. However, though the people were deprived of their traditional territories and pushed out to the remote areas, they have always tried to adapt themselves to the changing socio-economic conditions.

This report includes a brief description of the history and present situation of the Udeghe people in the Primor'e region (Primorskii krai), focusing especially on forest management by the villagers of Krasnyi Yar. This village, one of the most remote in the region, is located along the Bikin River, one of the tributaries of the Ussuri River, about six to seven hours by car from Khabarovsk and more than 12 hours from Vladivostok, the capital of the Primor'e region. The roads are not always in good condition. The population is presently at about 600, but diminishing. As to the ethnic component, people registered as Udeghe represent about 66 percent of the population (Table 1 and Figure 1). The others are the Nanai (one of the other indigenous ethnic groups of the region), the Evenks, Buryats, Russians, Ukrainians, Belorussians, and so on. The economic conditions in the village of Krasnyi Yar are not as good as in other indigenous villages in the Russian Far East, with few productive activities or jobs available. Many villagers are jobless, unemployed pensioners, or children. The standard level of income is very low, while the price of commodities is comparatively high, because of the village's remoteness, and the social infrastructure is not well-equipped. Even the electricity supply is limited to only a few hours a day. They recognize that logging gives them temporary but much-needed monetary income, yet they know that continued deforestation will destroy the basis of their society and culture in the long run. Unlike the immigrants from the outside, they have no other place to live. They are native to the areas along the Bikin River, where the forest has long provided them with various types of game for hunting, and with edible and other useful plants, shelter, and spiritual inspiration.

This report will provide a further focus on their hunting activities as a case study of the forest management of the villagers of Krasnyi Yar, hunting being one of the traditional forest activities of the Udeghe people. Though the over-killing of animals, which sometimes happens, is often condemned as a typical cause of the destruction of the environment, hunting itself is beginning to be recognized as one of the methods of non-timber, sustainable forest usage in the indigenous people's territories. In fact, indigenous hunters have demonstrated the sustainability of hunting for hundreds of years while under various social and political conditions.

Table 1. Population of the village of Krasnyi Yar in 2001.

	Population	Percent
Total	637	100.0
Northern minorities	523	82.1
Udeghe	418	65.6
Nanai	98	15.4
Orochi	4	0.6
Evenki	2	0.3
Chukchi	1	0.2
Other ethnic population	114	17.9

Source: Author.

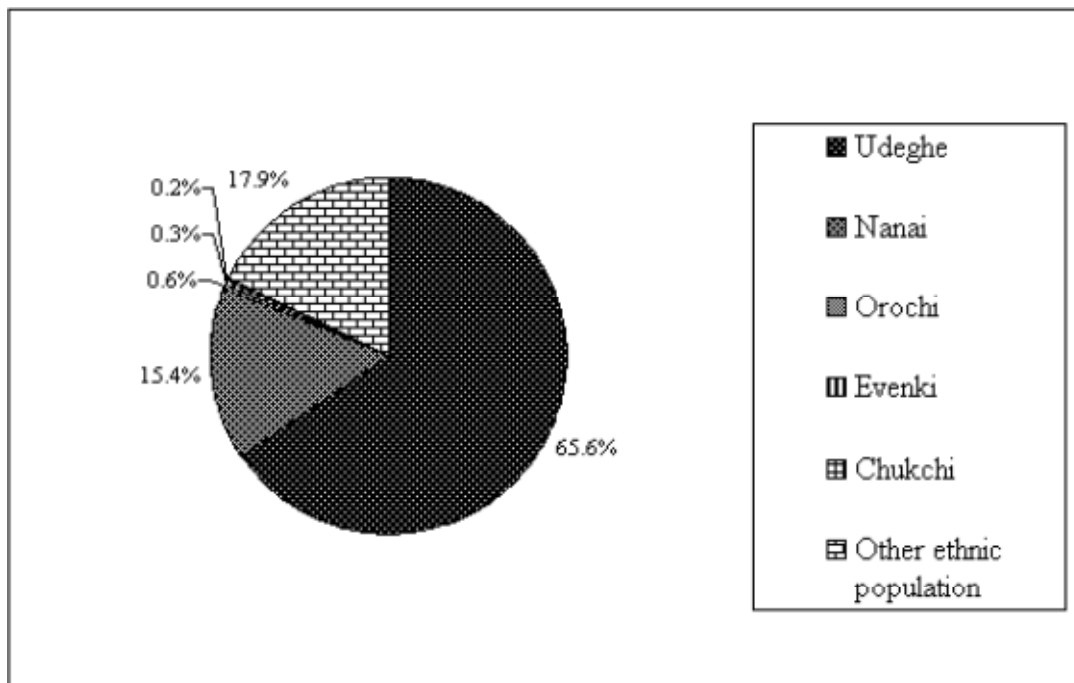


Figure 1. Percentage of the ethnic groups in Krasnyi Yar.

This report consists of three sections. The first describes the position of the Udeghe people within the indigenous ethnic groups in the Russian Far East and points out problems with the representation of their culture as described in ethnological and historical documents. The second section describes the present hunting activities of the Udeghe people in Krasnyi Yar, focusing on their productive calendar and techniques. Finally, the third section is an analysis of the data of a hunting company in Krasnyi Yar and an evaluation of the possibility of sustainable forest usage, consisting of hunting, fishing, and gathering, using traditional and contemporary techniques. This report is based on various literature and the author's own field research, which was conducted in 1995, 1996, and 2001.<sup>1</sup>

<sup>1</sup> The research was financially supported by the Toyota Foundation in 1995 and 1996, and in 2001 by the Sumitomo Foundation, and conducted with the support of Russian collaborators. I am very grateful to Dr. M. Patrusheva, Sr. A. Startsev, and Dr. S. Bereznitsky from the Institute of History, Archeology and Ethnology RAS in Vladivostok, and to Mr. A. L. Uza and Mr. V. A. Shilko, the former and the present presidents of the Ethnic Hunting Company "BIKIN."

## 1 The Udeghe indigenous people

### 1-1 Indigenous ethnic groups in the Russian Far East

Administratively, the Russian Far East consists of the following regions (*Respublika, oblast', krai, or okrug* in Russian): Primor'e, Khabarovsk, Sakhalin, Magadan, Kamchatka, Chukotka, Sakha Republic, and Amur. All these regions are not historically original Russian territories, but were occupied by Imperial Russia during the seventeenth, eighteenth, and nineteenth centuries. Until their conquest many ethnic groups occupied these regions, including the ancestors of the present-day indigenous people. Some of them, like the Buryats and Yakuts, established complex, state-like societies; some were involved with and subjects of the Chinese or Mongolian empires; and others, who had comparatively small-scale communities, were independently engaged in traditional productive activities, such as hunting, fishing, gathering, and reindeer breeding. Whatever society they had, they were the masters and the majority in their own areas.

The occupation by Imperial Russia changed the situation. Its policy of exploiting natural resources and indigenous communities promoted immigration from European Russia, which wiped out, pushed out, and assimilated the indigenous populations. Everywhere in the Russian Far East indigenous populations shrunk and became the minority, even in their own territories, soon after the establishment of Imperial Russia's rule. The Soviet Union, which replaced the empire during the socialist revolution, further promoted immigration policies to develop the Far East. It was accelerated, especially in the 1960s and 1970s, to speed up development and, at the same time, strengthened the policy of assimilation. As a result, most of the indigenous populations, except the Buryats and Yakuts, became increasingly marginalized and were pushed from regional centers into the remotest areas. For example, in the Khabarovsk region, indigenous people represent just 1.3 percent of the entire population, and in the Primor'e region, only 0.08 percent. Most of them live in villages far from the cities of Khabarovsk or Vladivostok, without easy access. Moreover, their own culture and languages lost influence, even in the remote villages, because of the strong assimilation policy of the Soviet Union. The Soviet government allowed the conservation of only some folk arts and music, and defined other elements as primitive, which should be replaced by "civilized" Soviet culture.

The Udeghe people in the Primor'e region were not the exception. Similar to the other indigenous peoples, like the Nanais, Ul'chi, or Nivkhi, they were deprived of their own territories, culture, and language by immigrants from the outside during the Soviet regime. Ethnologists of the early twentieth century reported that the Udeghe lived along the various tributaries running into the right banks of the Amur and Ussuri rivers and classified them into eight groups according to territories and dialects (Lar'kin 1957, 8–10). However, nowadays one can find only three small villages where the Udeghe are a majority of the population: Guasyugi in the Khabarovsk region and Krasnyi Yar and Agzu in the Primor'e region. The dialectal differences are already invisible, because many people cannot speak their own ethnic language anymore and speak only Russian. The Udeghe population is now at 1,902 persons, according to the 1989 census. Though the population has increased over the last half century, their own language, culture, and society are in danger of extinction.

Since the regime of Imperial Russia the language and culture of the Udeghe people have been objects of research by ethnologists and linguists. Specialists classified their language in the Tungus language group, like those of the Evenks, Evens, Negidars, Nanais, Ul'chi, Uilta (Oroks), and Orochi. The Orochi language is the nearest relative to Udeghe. Their economic life was once based on hunting and gathering in the forest and fishing on the rivers. The fundamental social organization was the patrilineal clan and lineage, in which people shared a common surname, territory, and property. Clan elders played important roles as leaders or mediators in cases of disagreement or judgement. They were animistic and shamanistic, believing in various kinds of spirits, and they explained natural phenomena and human acts as results of their actions. The shaman was an important person who could mediate and control the spirits.

Many specialists have often defined languages and cultures with these characteristics as primitive. For example, the Udeghe language has no literary system (the system is not completely established even now), which is one of the indices of the definition of civilized or advanced languages from an evolutionary point of view. Their economic basis (hunting, fishing, and gathering) and beliefs (animistic and shamanistic) are typical traits of the earliest stages of the evolution or progress of human society.

However, from the present point of view, we can say that the researchers over-stressed the primitiveness of these cultures. Though the Udeghe had many sophisticated elements in their culture, few researchers were interested in them. For example, they wore embroidered and ornamented silk or cotton clothes, which they imported from China. They lived in permanent wooden houses of Chinese style, as well as in temporary birch bark huts. Their economy was not self-sufficient but based on trade and exchange. They captured fur-bearing animals and gathered medicinal herbs, and sold them to Chinese merchants, trading for silk, cotton, ceramic vessels, lacquer wares, liquor, and various foods. These facts indicate that the Udeghe people had established a peculiar and highly sophisticated culture, composed of both original and imported elements. These cultural characteristics (peculiar and sophisticated) are shared by all the indigenous peoples, such as the Nanai, Ul'chi, Orochi, Negidars, Uilta, Nivkhi, Ainu, and so on, in the Amur and Ussuri basins and in the Sakhalin region.

“Essentialist” researchers often try to observe and analyze the “pure culture,” which has no influence from the outside. For example, they eagerly reported the use of animal skin or fish skin clothes, birch bark cabins, clan systems, and animistic beliefs, instead of describing silk costumes, permanent wooden houses, the administrative organization of the ruling empire, and complex beliefs of Chinese origin. However, such “pure culture” is often a product of crystallization by researchers with some purpose or prejudice. We must re-analyze and re-evaluate the indigenous culture as a whole, including the elements from the outside.

### 1-2 The Udeghe in historical documents

The existence of the ancestors of the present-day Udeghe people has been documented in a variety of literature since the seventeenth century. They were often described under the name “Kiyakara” in the official chronicle of the Qing dynasty (“*Qing Shi Lu*”), and in other Chinese literature. The Qing was the final dynasty in China, constructed by the Manchus. The Manchurian people were originally one of the tribute payers to the Ming dynasty. They captured fur animals like sables, foxes, river otters, and lynxes to pay to the Ming dynasty or to trade with Chinese merchants. However, at the same time, they required the people of the regions of the present Russian Far East to pay with fur as a tribute or to sell it as a commodity. The importance of these regions did not change even after they constructed their own dynasty (Qing) in 1616 and became rulers of China in 1644. They fought with Imperial Russia over the territorial rights to these regions and finally protected them with the Nerchinsk Treaty in 1689. After that, the Qing dynasty organized the people in the Amur and Ussuri basins as tribute payers and gathered a variety of information, including ethnological data.

According to the *Handbook of Tribute Payers to the Imperial Qing, Volume 3 (Huan Qing Zhi Gong Tu)*, edited by Fu Heng in 1761, the Kiyakara people lived along the tributaries of the Ussuri River and on the coast of the Sea of Japan. They wore a small silver or copper ring in their noses. Men wore deer skin headgear, and women ornamented their clothes with a variety of embroidery. Their cabins and boats were often made of birch bark. They were mainly engaged in hunting and fishing. They captured fish with hooks and spears and did not use fishnets. They spoke the Kiyakara language and paid in sable fur as a tribute every year (Fu 1761 (1991): 250).

Two clans (*hala*) of the Kiyakara (*Kiyakara hala* and *Banjirgan hala*) are identified in the archives of the administrator's office in Ilan Hala (*San Xin Fu Du Tong Ya Men Dang An*). They were registered in 45 households and paid 90 pieces of sable fur as a tribute to the dynasty every two years during the eighteenth century and the first half of the nineteenth century (Regional Archive of Liao Nin Sheng et al. 1984). Mention of the *Kiyakara hala* from the Bikin River (*Bihin bira* in the Manchurian language) is found in the archives of the administrator's office in Ningguta (*Ning Gu Ta Fu Du Tong Ya Men Dang An*) in the beginning of the eighteenth century (Matsuura 1997, 11–14). They might have something to do with the ancestors of the present-day Udeghe people on the Bikin River.<sup>2</sup> Ilan Hala and Ningguta were the central cities for the rule of the tribute payers in the Amur and Ussuri basins and the Sakhalin region. The city

---

<sup>2</sup> To be precise, the people recorded in the documents were not the direct ancestors of the present-day Udeghe on the Bikin River, because they moved to the Sungari basin and were organized into the Manchurian eight banner troops in 1732. However, some people must have remained there, though they were not recorded. The documents indicate that the basin of the Bikin River has been one of the proper territories of the ancestors of the Udeghe people since the eighteenth century.

of Ilan Hala was located on the mouth of the Mudanjan River (one of the tributaries of the Sungari River) and is now named the city of Yilan. Ningguta was located on the right banks of the Mudanjan River, and though it played an important role as a center of the northeastern provinces of the territories of the Qing dynasty in the seventeenth and eighteenth centuries, all that is left now are some ruins in the millet field at the site.

The Kiyakara people had almost no experience of the Russians until the middle of the nineteenth century. So when the Russians came to their territories in the 1860s for the first time, they were panicked. According to a document from the administrator's office in Ilan Hala, some Kiyakara people immigrated in 1868 to the Chinese territory to escape from exploitation by the Russians (Regional Archive of Liao Nin Sheng et al. 1984, 430–433). The outline of the present Russian-Chinese border in the Far East was formed in 1860. Russian immigrants pushed them out over the new border. The Manchurian administrators, at first, reacted negatively to the immigration of the Kiyakaras, because they moved into Chinese territory without any permission, but finally they allowed it, sympathizing with their situation. The document indicates that they were very good at speaking Chinese, as well as at using firearms. We can guess that the ancestors of the Udeghe people had already well adapted themselves to Chinese society by the middle of the nineteenth century.

In Russian literature the ancestors of the Udeghe were identified by the name “Orochi.” A Russian ethnologist, Leopold von Schrenck (Shrenk), who conducted the first extensive and intensive research of the peoples on the Amur River and adjacent areas in 1854 to 1856, briefly yet precisely described characteristics of their society and culture (Shrenk 1883). However, he identified all of the peoples living on the tributaries flowing into the right banks of the Amur and the Ussuri rivers as “Orochi.” He did not recognize the ethnic differences between the present-day Orochi and Udeghe, but insisted on a different classification in which he distinguished the “Taz” from the Orochi. According to his definition, the Taz were the indigenous people who had been long assimilated by Chinese culture and spoke Chinese.

His classification was widely supported until the beginning of the twentieth century. For example, the Russian administrators counted and registered the indigenous peoples in the Far East on the basis of this classification in the first census of Imperial Russia, conducted in 1897. Some ethnologists, like S. Patkanov and F. Albert, insisted that it was meaningless to classify the Orochi into several ethnic groups (Patkanov 1906; Albert 1956). However, in the beginning of the twentieth century, intensive research on the tributaries of the Ussuri River and on the coast of the Sea of Japan revealed that there might be an ethnic, cultural, and linguistic border along some branches of the Sikhote-Alin' mountains. It divided the former Orochi people into northern and southern groups. The former could be called “Orochi,” while the latter called themselves “Ude” or “Udihe.” S. Brailovskii, who conducted the statistical research on the coast of the Sea of Japan for the census, insisted that these two groups should have been classified as independent ethnic groups (Barailovskii 1901). Later, R. K. Arsen'ev, a famous ethnologist and geographer in the Russian Far East, supported this on the basis of his own intensive research in the Sikhote-Alin' mountains, and the Soviet government adopted it in its first census in 1926–27. The Russian variation, “Udegeitsy,” became the official ethnic name in the 1930s.

As mentioned above, the Udeghe people in the last part of the nineteenth century and the beginning of the twentieth century could be classified into the following eight sub-groups (Lar'kin 1957, 8–10).

1. *Khungake*, living on the Khungari River flowing into the right bank of the Amur River
2. *Uninka*, living on the Anyui River flowing into the right bank of the Amur River
3. *Khunke*, living on the Khor River flowing into the right bank of the Ussuri River
4. *Bikinka*, living on the Bikin River
5. *Imanka*, living on the Iman River (Large Ussura) flowing into the right bank of the Ussuri River
6. *Samarginka*, living on the coast of the Sea of Japan and the Samarga River flowing into the Sea of Japan
7. *Namunka*, living on the southern part of the coast of the Sea of Japan and on the Fuchin River flowing into the Ussuri River
8. The group living on the Kur River and Urmi flowing into the left bank of the Amur River (the group name is unknown)

The Taz, mentioned above, might be a part of the seventh group that was assimilated to Chinese in language. Today the seventh and eighth groups do not exist. They have already died out or have been completely assimilated by other ethnicities. Though the Taz people still live in a village in the Primor'e region, they do not recognize themselves as Udeghe. And other groups are in danger of extinction. Epidemics, alcoholism, and deforestation, which arrived with the immigrants, have wiped them out since the occupation by Imperial Russia. Only three groups, the *Khunke*, *Bikinka*, and *Samarginka*, have maintained their uniqueness as sub-ethnic groups. They are the majority in their territories. In the 1960s and 1970s, the Soviet government compelled the indigenous people to live in permanent villages, according to its policy to strengthen the construction of a socialist society. The present ethnic villages of the Udeghe, Guasyugi of the *Khunke*, Agzu of the *Samarginka*, and Krasnyi Yar of the *Bikinka*, were politically created in those days.

## **2 Hunting: a style of traditional Udeghe forest usage**

### **2-1 Annual calendar of the Udeghe hunters on the Bikin River**

The forest is the most important place for the Udeghe people. It supplies them with materials for food, clothes, and shelter, and spiritual and mental support. The forest is a place of work as well as of relaxation. There are many dangers, not only physical but also spiritual, in their forests. The Udeghe people believe that various kinds of spirits inhabit the forests and that some are very dangerous. Before going into the forest, they always conduct rituals to negotiate with them, escape from them, or overcome them with the help of shamans or supporting spirits. Nevertheless, they love their own forest and are eager to go there to track game, catch fish, and collect edible and useful plants. They seem to have strained relations with the forest spirits, because they often conduct these activities, while communicating or fighting with the spirits.

The Udeghe people generally recognize hunting as the most prestigious activity in the forest, judging from various discourses of Udeghe hunters. First, hunting supplies them with the most prestigious food—meat. Second, it provides the hunter's family with a large monetary income. Third, it demands unbelievable skills, physical power, precise knowledge about nature and equipment, and keen perception. Fourth, it provides them with the most frequent chance to access the spiritual world. Therefore hunting implies various cultural elements, not only material but also social and spiritual.

Hunting resources are not equally distributed, either in space or time. Natural conditions (geographical and climatic) and the characteristics of the animal (maturity, sex, and patterns of activity) limit hunting sites, seasons, and techniques; so hunters have their own calendar of activities. Though the Udeghe once had their own calendar system, influenced by the Chinese agricultural calendar, now they decide on the hunting season for each type of game on the basis of the international solar calendar.

Many hunters say that the main hunting season begins in the middle of October, when the hunt for fur-bearing animals begins. Although certain laws now restrict the hunting seasons of each type of game, the main hunting season begins in autumn, even when there are no juristic restrictions. Autumn and the beginning of winter are the best seasons for hunters to capture many kinds of game. They have good sightlines in the forest after the leaves have fallen and, after the snow falls, animal tracks are easily spotted. The animals are very fat and healthy, eating extra to prepare for the severe winter, giving them considerable meat and excellent fur. At the beginning of the autumn hunting season all the hunters in Krasnyi Yar dash into the forests in their own territories.

Until the 1950s, the end of the salmon season was also an important time marking the beginning of the main hunting season, because salmon was one of the staple foods of the Udeghe people. Salmon runs were seen in September and October, and sometimes even until December, when the rivers froze up. However, they are not seen anymore on the Bikin River. Now they are captured in such large quantities in the Amur basin that none can reach the tributaries of the Ussuri River.

In September (sometimes at the end of August), before the beginning of the hunting season for fur-bearing animals, the Udeghe hunters go into the forest to capture Manchurian red deer (*Cervus elaphus*), which has its mating season in the beginning of autumn. This hunt plays a role in the preparation of food stocks for the intensive winter hunt. Soon after the first snowfall, hunters dash into their territories to set various traps for capturing fur-bearing animals. Before

motorboats were popular, hunters went in rowboats or, in winter, when the rivers froze up, by dog-sled. Later, motorboats and snowmobiles were distributed during the Soviet regime, and the government provided them with fuel and maintenance parts. However, motors became the Achilles' heel of their economic activities. After the collapse of the Soviet Union, hunters and the hunting industry suffered from shortages and inflation of prices for fuel and parts.

When the hunters arrive in their territories, they at once set fishing nets in their spots to catch a certain amount of fish and process them for stock food. They mainly fish for taimen, lenok, pike, carp, and so on. After the preparation of the stock food, they start setting traps and hunting animals. Fishing plays an important role in hunting, providing hunters with a stable food supply. In other words, the fishing supports their hunting activities.

Every day during the whole winter, hunters walk around their territories to check their traps and search for animal tracks. They capture various animals, depending on the season, geographical and climatic conditions, the purpose of hunting, and their own skill.

Each type of game has its own hunting season. For example, the main hunting season for fur-bearing animals is from mid-autumn to mid-winter, because their fur is in the best condition during this period. However, hunters use different techniques and equipment under different conditions, e.g., whether the ground is covered with snow or not and whether the rivers are frozen or not (Taguchi 1998, 2000; Sasaki 2001). The hunting season for large mammals is generally longer, from the beginning of autumn to the end of winter. But it also varies, depending on the sort of animals and the purpose of hunting. As mentioned above, the main season for hunting red deer is in September and October, but hunters also hunt them in May and June for their soft summer horns. The hunting of bears sleeping in their dens begins in December and continues until spring. But the purpose is different between the beginning and the end of the season. In winter hunters kill bears for meat, while in spring the main purpose is for bear gallbladders, the source of a very precious drug used in traditional Asian medicine.<sup>3</sup>

When transportation technology was not so developed, out of necessity, hunters would celebrate New Years in their hunting huts. But now many hunters go home to their villages for about ten days to be with their families. After that they return to their territory and continue hunting.

The end of the legal hunting season is now in the middle of February, signaling the end of the season for hunting fur-bearing animals. Hunting large mammals continues into March. Towards the end of the season, hunters try to kill bears, red deer, and wild boars to get meat for their families and relatives. When the season ends, they gather their traps and game, pack their equipment and captured animals onto their snowmobiles, and return home. When they have too much equipment, it is left behind in their hunting huts, and later taken out by motorboat when the rivers are ice-free. Once back at home, the hunters process the fur and meat and repair their equipment.

The rivers are liberated from ice in the beginning of April. Generally, spring is a rest season for the hunters, but it is not correct to think that they do nothing. The main fishing season begins in spring, a very important time for the Udeghe, because it supplies them with food for the summer. They catch taimens, lenoks, pikes, carp, and so on, and slice and dry them to prepare them for storage.

During the Soviet regime, some Udeghe hunters would hunt red deer for their soft covered horns from the middle of May to the middle of June. They say that the hunting was very difficult and that processing the horns was complicated, but the processed soft horns provided them with large monetary income. The state enterprise (*gospromkhoz*) sold them to Chinese merchants for very high prices. The summer horns of the red deer are the source of one of the most precious drugs used in traditional Asian medicine. However, since the collapse of the Soviet Union, no-one has been hunting deer in summer, because the merchants switched to buying less expensive Chinese products of the same quality.

Conditions in the forest during midsummer are not good for hunting. Leaves obstruct the hunters' view, widely spreading boughs and branches block their movements, hoards of mosquitoes bother them, and the animals go into the deepest parts of the forest. Nevertheless, some Udeghe hunters still go there to hunt deer for meat. Under such conditions they do not actively move around, but wait for the animals near their feeding or watering spots, hiding

---

<sup>3</sup> Today the Russian government prohibits trade in bear gallbladders and the hunting of black bears, following the international treaty for the protection of wild animals (The Washington treaty). However, hunting brown bears for meat is allowed with licenses from the regional government.

behind bushes or sitting on a shelf in a tree. As researcher H. Taguchi suggested, in general, summer is a difficult season in temperate and subarctic forests for foragers to acquire enough food (Taguchi 2000, 14). People survive by eating stored food or small amounts of fresh meat and fish, and wait for the next salmon run and hunting season to begin.

Nowadays many hunters in Krasnyi Yar do not go hunting during spring and summer. They are often employed and work in constructing roads or buildings to make money. During holidays or on days without work, they repair and clean their guns, traps, and other equipment, or tend their vegetable gardens, and wait for the next hunting season.

## 2-2 Subsistence hunting

The hunting activities of the Udeghe people can be placed into two categories: subsistence hunting and commercial hunting. Though hunting targets and techniques sometimes partially overlap, the purposes are different. In subsistence hunting, hunters capture animals to consume all parts of their bodies for their own use. The meat is basically divided among all the participants of the hunt, and sometimes distributed among the villagers. The fur and head belong to the hunter, recognized as the owner of the game. Generally, he is the first to discover or shoot the animal, but the criteria vary depending on conditions. They sometimes sell the skin and some of the internal organs, like the gallbladder, to merchants, but, traditionally, the meat is rarely treated as a commodity.

The purpose of commercial hunting is to get precious commodities like fur, musk, and gallbladders. Hunters are very sensitive to capturing animals in their best condition, and have developed various techniques for this purpose.

The use of hunting territories is also different between subsistence and commercial hunting. Factually, no territorial borders restrict hunters for subsistence hunting, especially tracking and waiting. Basically, a hunter can track or wait for animals anywhere, provided some etiquette is followed, e.g., not touching an animal that other hunters have wounded, never stealing an animal from another hunter's traps, and so on. This may have something to do with the custom of distributing the meat among all the participants of the hunt or all the villagers. And at its basis, there may be a common recognition that the animal meat is a gift from the master spirits of the forest to all the hunters, and that no one can be its true owner.

On the contrary, the territories for hunting fur-bearing animals are very strict. No-one can set traps or track animals in another hunter's territory. If some hunters share a territory, they strictly divide it. This may be related to the fact that the income acquired from the fur trade belongs to a person or his family. Though they recognize that the true owner of the fur-bearing animals is also the master spirits of the forest, they believe that the game personally belongs to a hunter, although it is difficult to tell how the Udeghe decided this. It might have been established in the long history of the fur trade with Manchurian and Chinese merchants.

Generally, game targeted for subsistence hunting are large mammals which provide a large amount of meat, like deer, elk, bear, wild boar, wild goat, big horn sheep, and so on. Next is a description of some of the traditional and modern techniques used for hunting deer, bears, and wild boar.

### 2-2-1 Deer hunting

There are several kinds of deer in the forests of Krasnyi Yar: the Manchurian red deer (*Cervus elaphus*), the roe deer (*Capreolus capreolus*), the sika deer (*Cervus nippon*), and the musk deer (*Moschus moschiferus*). All of them are important game for the Udeghe hunters, but hunting red deer is the most prestigious. This kind of deer is big and powerful, demanding more power and skill from hunters than the other kinds. Moreover, it supplies them with much meat and, sometimes, a large monetary income.

As mentioned above, the Udeghe hunt the Manchurian red deer during its mating season in September. Hunters call a buck from behind a bush or from another bank of the river with a special trumpet made of birch bark that sounds like a buck calling for a doe. When the buck hears it, he thinks that a rival buck is nearby, and when he appears near the hunters, they shoot him.

In another situation, they shoot from a boat in the early morning, when the deer comes to the riverbank to eat its favorite plants. A hunter silently steals up close to the deer in a small boat in the darkness. The Udeghe hunters can tell where a deer stands by the small sounds it makes when eating. Once close enough, the hunter uses a light to spot it and



shoots the moment it's seen. Deer meat is a precious and prestigious food for the Udeghe. They dry or freeze it for storage. Shredded frozen deer meat with sliced onions and peppers is one of the most delicious Udeghe dishes.

### **2-2-2 Bear hunting**

In the Primor'e region and in the southern part of the Khabarovsk region, there are two kinds of bears: the brown bear (*Ursus arctos*) and the black (Himalayan) bear (*Selenarctos thibetanus*). Though both kinds of bears were once game of the Udeghe hunters, now laws concerning the protection of wild animals prohibit the hunting of black bears, because they are in danger of extinction in these regions.

As mentioned above, the bear-hunting season is in winter and early spring. Hunters seldom capture or shoot a bear out in the open, because it is very dangerous even when every hunter has a rifle. Usually they go hunting in a group and try to catch a bear sleeping in its den. When a hunter finds a den with a bear sleeping inside, he never tries to capture it by himself, but informs the other hunters. The bear belongs to the first discoverer of the den. When every hunter of the group gathers, the bravest awakens the bear by poking it with a long stick. He repeats it several times until the angry bear jumps out of the den. The moment that it shows more than half its body, the hunters shoot it in the forehead or the heart. Shooting other spots does not kill it, and the wounded bear rages about and attacks the hunters.

It is needless to say that bear-hunting is a very dangerous activity. Their ancestors were engaged in much more dangerous hunting—they killed bears with spears. The moment the angry bear jumped out of its den, the hunters would penetrate its very heart with a spear. Such hunting demanded the highest level of skill and bravery. However, in any age the Udeghe love the bear hunt. It gives them the highest prestige, as well as much meat and a precious gallbladder. The bear's head, skin, and gallbladder belong to the owner of the animal, i.e., the discoverer of the den, but the meat is equally divided among the participants of the hunt.

### **2-2-3 Hunting wild boar**

Wild boar (*Sus scrofa*) is also one of the main targets of the Udeghe hunters, supplying them with considerable amounts of meat. The Primor'e region and the southern part of the Khabarovsk region are the coldest area of its habitat that usually extends from the more temperate zones. Though boars are tough and powerful, they are not good at running in deep snow, and hunters take advantage of this weak point. Usually, the Udeghe go boar hunting in a group of two or three hunters. When they find a group of boars, they steal up from the leeward side and shoot the moment the boars are aware of them. When the animals run from them, the hunters give chase, and keep running, switching off with each other, until the animals are exhausted. When the animals are too tired to run any further, the hunters shoot to kill. An old hunter, in an interview, said that in his childhood hunters used spears to hunt boars. They often drove the boars towards their hunting huts, making for easier capture and carrying of the meat. Even today this herding technique is often used.

### **2-3 Commercial hunting**

Commercial hunters target mid-size or small animals for their fur. Fur-bearing animals living in the hunter's territories along the Bikin River include sable, marten, stoat (ermine), river otter, fox, lynx, badger, raccoon dog, raccoon, muskrat, and mink. The last three animals emigrated from North America during the Soviet regime. Fur production, being one of the most important export commodities of the Soviet Union to Europe and America, was protected in Siberia and the Far East by national policy, and foreign fur animals were even actively imported to boost productivity.

As mentioned in another article (Sasaki 2001, 15), before Siberia and the Far East modernized, the most important point of indigenous commercial hunting was to capture the animals with the smallest damage inflicted. In the pre-modern Asian world consumers of the precious fur were royal families, aristocrats, and administrators of the highest class. They didn't accept any damage to the product and required hunters to capture and process fur of the highest quality. Hunters had to develop various techniques and equipment to satisfy this requirement (as to traditional traps used for hunting fur-bearing animals, see Sasaki (2000, 2001) and Taguchi (2000)).

Modernization in these regions changed the situation. After the collapse of the Chinese and Russian empires, new consumers, rich people like the bourgeois, replaced the royal families and aristocrats. They required quantity, not quality, because the consumer population was much larger. Hunters had to increase their productivity to satisfy the demands of the newly rich people. Following the change in consumer demand, hunting techniques and equipment changed. Hunters began to give up using traditional traps, which inflict less damage but take more time to set, preferring to use iron traps. Though some hunters from the older generation still use traditional traps, many younger hunters don't know how to set them anymore.

Though many Udeghe hunters in Krasnyi Yar don't use traditional traps, they have developed a number of techniques and devices when using iron traps. For example, one young hunter, thirty years old when interviewed, described some techniques for setting iron traps for sable. Usually he sets traps on the track of the sable, camouflaging it with fallen leaves in autumn and with snow in the winter. When he erases a part of the track by mistake, he stamps sable footprints in the snow with a dried paw or a wooden stick carved like a paw. He sets about 20 traps along a track for five kilometers. Using this technique the hunter takes advantage of the sable's habit of always following its own tracks. In another case, he uses meat or fish bait to decoy the sable into the trap, often in a hollow at the base of a tree, taking advantage of the sable's habit of preferring to sleep in hollows, as in the case of setting the traditional traps, the *Langi*. Though the young hunter sets an iron trap instead of the traditional one, he basically uses the same method. According to him, the probability of success using iron traps is 10 to 15 percent. He said he also sometimes chases and shoots sable. As far as we know, he was the only hunter in Krasnyi Yar who used a dog for hunting sable.

Another hunter of the older generation described a similar method of setting iron traps; however he developed his own techniques. For example, he often chooses a place where a tree lies across the sable's path. He sets a camouflaged trap on the fallen tree and cleans the snow around it. The sable, running along its own track, jumps onto the tree, as it always does, and falls into the trap. The hunter uses putrefied meat or stale fish for bait, which smells bad to humans, but attracts the sable. When he captures a sable, he sometimes drags its inner organs along the route to his hunting hut to mark it with the animal's smell, and then sets traps along the same route. He said that it was very effective to decoy the animal into the traps. Like the young hunter, he also chases sable, though not with a dog, and he can distinguish whether a sable is hungry or not. He doesn't try to chase a hungry sable, because it runs much faster. If he recognizes the sable is full, he drives it into a hollow, and smokes it out. The moment the sable shows itself, he shoots it. If the sable sits for long time in the hollow and it is getting dark, he sets iron traps in front of the entrance and then smokes it out.

Game captured with iron traps or shot by a gun usually have some damage. Iron traps bite an animal on its paw, often torturing it to death. The animal rages about and damages its fur. Moreover, wounded animals sometimes chew off their own paws to escape. Animals shot with a gun have a small hole in its fur. Sable hunters often train themselves to shoot an animal in the eye in order to protect the fur and fetch a higher price. However, they are sometimes unsuccessful and shoot the body. The traditional traps seldom produce such damage. For example, the dead-fall type of trap (*Dui, Langi, Kafari, and Hadana*, see Sasaki (2000, 2001)) hits an animal on the head, neck, or the body, and kills it instantly. It does not torture the animal and inflicts none or very little damage to its fur, and does not allow the animal to escape. From the point of view of fur quality and the conservation of resources, traditional traps are much superior to contemporary iron traps. However, the latter is easier and faster to use, boosting productivity.

Hunters know that the price for damaged fur is lower. The Russian government has a ranking system for fur, based on quality and depending on the degree of damage. The less damaged the fur is, the higher rank the government gives it. Of course, hunting companies and fur traders buy the fur of higher ranks for good prices. Old hunters using traditional traps are proud of producing fur of the best quality. However, younger hunters compensate for the lower prices for damaged fur by trying to capture more animals. In other words, they regard quantity as more significant than quality. Such a tendency may be one of the characteristics of modernized societies, however it might be one of the causes of the overexploitation of natural resources.

### 3 Contemporary forest management of the Udeghe in Krasnyi Yar

#### 3-1 Management of *Gospromkhoz* "Pozharskii" in the Soviet regime

As is well known, the main characteristics of the economic management of the Soviet Union were the planned economy and nationalized enterprises. Though they are often mentioned as typical defects of socialism or a symbol of its low productivity, they played a distinctive role in the economic development of the Soviet Union from the 1930s to 1950s.

The hunting and fishing territories of the indigenous people in the Far East were the targets of collectivization and nationalization, as were the factories and farms in European Russia, because they were also identified as productive properties. The government organized indigenous hunters and fishermen into collective farms (*kolkhoz*) and national (or state) farms (*sovkhos*) and gave them production targets based on the annual state plan. The organizations were integrated into several large state enterprises in 1960s and '70s, following the policy of expanding productive organizations practiced during the regimes of N. Khurshchev and L. Brezhnev. Under this process, the state foraging farm, (*gospromkhoz*) "Pozharskii," was established in Krasnyi Yar at the end of the 1960s, integrating all the small collective farms located in several villages along the Bikin River. At the same time, the people who lived in various villages or hamlets along the river were gathered together into the village of Krasnyi Yar, which was established in 1959.

This state farm consisted of some productive sections, such as foraging, farming, processing (timber and other products), and services (support to researchers and tourists). The foraging section was the most important during the Soviet regime, producing fur, wild animal meat, fish, berries, and medicinal herbs. Fur sales represented 33.8 percent of annual farm sales in 1991 (Table 2 and 3). In that year, 50 professional hunters were employed, who caught 2,206 squirrels, 607 sables, 198 weasels, 74 minks, 11 hares, a badger, a raccoon, and a marten, as shown in Table 4. The farm sold the fur of these animals and other animal products to the government (or the state fur trading company) for 217,700 roubles equal to 12,6621 U.S. dollars (according to the exchange rate at the end of that year). As to the average unit price of the fur of a particular animal, sable was the best at 213.18 roubles, or about 124 U.S. dollars. This price appears reasonable or even a little bit expensive, judging from the price for a sable boa of 1,000 yuan (about U.S.\$120) in a department store in Beijing, China in 1993.

The proceeds from other hunting-gathering products, like meat, berries, and medicinal herbs, represented more than 40.7 percent of total sales. The farm sold a large amount of wild animal meat (3.2 t), boars (215 heads), wild bracken (3.2 t), ferns (5.7 t), wild berries (31.2 t), ginseng (0.4 kg), a large amount of *eleutherococcus* leaves and roots (3.3 t and 8.2 t, respectively), and other medicinal herbs, with sales amounting to 261,800 roubles (Table 2 and 4), equal to 152,271 U.S. dollars. In sum, the sales of the foraging section represented 74.5 percent of total sales.

On the contrary, timber sales were comparatively small, at only 10.9 percent of total sales, less than the percentage of sales of medicinal herbs, at 13.1 percent (Table 2 and 3). The output from timber production in 1991 was by no means smaller than in other years, but other products were produced in such huge amounts that it was not so obvious.

Products from the farming section consisted of vegetables and honey, with honey being one of the main products. The farm itself produced honey and, at the same time, it encouraged villagers to be engaged in apiculture. The quantity of honey produced by the farm and other villagers amounted to 2.15 tonnes in 1991 with sales totaling 43,300 roubles (equal to U.S. \$25,185). However, it did not play an important role in total sales, because its unit price was restricted to low levels.

To summarize, the state farm was managed depending largely on the foraging section. However, at the same time, the farm tried to diversify its product line and maintain a balance between them, which was very important for the farm to disperse the risk among various kinds of products.

Table 2. The sales of products of the state farm, 1991–1994 (in 1,000 roubles).

	1991	1992	1993	1994
Fur	217.7	1,864.9	9,130.0	29,672.7
Medicinal materials	84.0	649.1	3,620.8	5,387.6
Other hunting products	177.8	401.4	1,651.6	3,705.8
Agricultural products	22.3	140.0	1,123.5	0.0
Forestry products	70.0	29,10.0	4,304.9	18,223.0
Processed bracken	15.4	101.7	229.3	268.0
Other products	42.6	113.1	243.4	152.0
Fee for service	13.6	924.6	21,518.6	25,789.3
Total	643.4	7,104.8	41,822.1	83,198.4

Source: Author.

Table 3. Percentage of the sales of products of the state farm (1991–1994).

	1991	1992	1993	1994
Fur	33.8	26.2	21.8	35.7
Medicinal materials	13.1	9.1	8.7	6.5
Other hunting products	27.6	5.6	3.9	4.5
Agricultural products	3.5	2.0	2.7	0.0
Forestry products	10.9	41.0	10.3	21.9
Processed bracken	2.4	1.4	0.5	0.3
Other products	6.6	1.6	0.6	0.2
Fee for service	2.1	13.0	51.5	31.0
Total	100.0	100.0	100.0	100.0

Source: Author.

### 3-2 Establishment and management of the Ethnic Hunting Company OAO “BIKIN”

In the autumn of 1994 the state foraging farm, *gospromkhoz* “*Pozharskii*,” was privatized and reorganized into a joint stock company named the Ethnic Hunting Company OAO “BIKIN.”<sup>4</sup> As already described in another IGES report in 2000 (Sasaki 2000, 498–499), the process of this reorganization was very complicated. It implied various elements and incidents, including the preparatory roles played by the emergence of the campaign to restore indigenous rights in the Russian Far East and Siberia during the age of *Perestroika* and the movement for legal recognition and registration of land rights as “Territories for Traditional Nature Usage,” or TTP (*Territoriya Traditsionnogo Prirodopol’zovaniya*). The collapse of the Soviet Union at the end of 1991 and the following economic crisis woke up the people in Krasnyi Yar. And the struggle against a deforestation project in the upper part of the Bikin River, planned by a Russian–Korean joint enterprise, strengthened the solidarity of the villagers. Although some dropped out after winning the struggle, the policy of privatizing state enterprises and support from some NGOs promoted the reorganization of the state foraging farm.

4 “OAO” means that the stocks of this company are opened. When the government decided to privatize former state enterprises and farms, it prepared some options. The establishment of joint stock companies was one of them. In Russia there are two types of joint stock companies, the open type and the closed type. In the former, the property of the former state enterprise or farm is once changed to stocks, which can be shared not only by the members of the company but also by other persons or organizations. In the case of the OAO “BIKIN,” the members of the company hold about 60% of the stocks, while it sold 40% to a securities company.

Table 4. Outputs of products of the state farm and ethnic hunting company from 1991 to 2000.

	Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>Fur</b>											
	Squirrel	2,206	1,340	4,597	5,884	1,393	1,221	535	468	333	328
	Weasel	198	133	152	222	218	129	79	93	56	60
	Mink	74	199	246	161	50	60	65	104	89	220
	Sable	607	745	408	498	348	224	295	243	198	600
	Raccoon	1	1	6			2				
	Badger	1	2	19	2						
	Wolf		1								
	River otter		1	1							
	Hare	11	6	2							
	Marten	1		2							
	Muskrat			3	9						
<b>Other animal products</b>											
	Bears' gallbladder			3							
	Musk	3	2	3							
	Meat of wild animals (kg)	3,200	2,500	2,700	700						
<b>Plant products</b>											
	Fern (kg)	3,200	3,000	3,500		72		321		210	193
	Magnolia vine (kg)					3,456					
	Leaf: <i>Eleutherococcus</i> (kg)	3,300	370	30				435			
	Root: <i>Eleutherococcus</i> (kg)	8,200	18,400	520	6,320			1,425		4,000	10,000
	Ginseng (kg)	0.403	1,151	1,345	980						
	Celandine (kg)	60	20								
	Leaf of cowberry (kg)	720	50							285	290
	Aralia (kg)		4,300								
	Bracken (kg)	5,700	3,100	130	40						
	Berry (kg)	31,200	3,100								
	Walnut (kg)		900	50	70						
<b>Agricultural products</b>											
	Honey (kg)	2,150	700	1,650	820						
	Vegetables (kg)		20								
<b>Forestry products</b>											
	Round wood (m <sup>3</sup> )		2,496.0	572.0	11.5	190.0	223.0	405.0	540.0	1,621.26	2,635.83
	Fuel wood material (m <sup>3</sup> )	1,602.0	2,654.0	972.0	395.0	895.0	351.0	1,382.0	807.0	3,778.52	3,920.66
	Fuel wood (m <sup>3</sup> )	1,964.0	2,047.0	1,028.0	522.0	441.5	292.0	884.5	1,638.0	2,461.10	4,132.07
	Sawn woods (m <sup>3</sup> )	85.0	413.0	287.0	113.0	137.4		316.0			
	Lath (pieces)	5,500	2,500	21,000		9,000	5,000				

Source: Author.

This reorganization could be seen as a successful example of the privatization of state farms in indigenous people's regions, because the company survived through a very critical period and still exists today, while many reorganized farms, co-operatives, and private companies collapsed or went bankrupt soon after being established. It was extremely difficult to manage a privatized hunting or reindeer-breeding enterprise, especially in Siberia and the Far East. These regions are so remote from state and regional centers that costs are very high for transportation and the construction of infrastructure. Moreover, there is poor demand for the products of foraging and reindeer-breeding, such as meat, skin, and fur of tamed reindeer and wild animals. In general, farms and enterprises in the areas of the indigenous people in Siberia and the Far East have been fundamentally dependent on the support of the central and regional governments. The governments bought their products at the official prices regardless of the balance of supply and demand. However, this practice is impossible in the market economy.

Krasnyi Yar is also far from the center of the region and village infrastructure is inadequate, as seen with the limited supply of electricity. However, compared to other arctic or subarctic regions, Krasnyi Yar's situation is a little better. It is accessible by train, bus, or car, while northern Yakutia or Chukotka can only be reached by airplane or helicopter. In fact, few reindeer-breeding or hunting enterprises still exist in these regions.

Why did the ethnic hunting company in Krasnyi Yar survive even in the period of the economic crisis after the collapse of the Soviet Union? The reason is not only its location. Judging from the change of the main products of this company and the previous state foraging farm, it is obvious that the company tried to produce anything that it could sell to survive during the critical period. In 1992, soon after the collapse of the Soviet Union, the state farm strengthened its timber production. Timber production output in 1992 was the largest of all the previous ten years. As shown in Table 4, the farm produced 2,496 m<sup>3</sup> of round wood, 2,654 m<sup>3</sup> of materials for fuel wood, 2,047 m<sup>3</sup> of fuel wood, 413 m<sup>3</sup> of sawn wood, and so on. The share of timber sales compared to total sales rose from 10.9 percent in 1991 to 41.0 percent in 1992 (Table 3). On the contrary, the percentage of sales of fur products diminished, though the hunters captured many sables.

However, the output and sales of timber products decreased in 1993. For example, only 572 m<sup>3</sup> of round wood were produced, equal to only 25 percent of the output in 1992. The percentage of sales diminished to 10.3 percent in 1993 and went up a little to 21.9 percent in 1994 (Table 3), perhaps a reaction against the quick increase of output in 1992. Instead of timber production, the service section expanded its percentage of total sales. It was 51.5 percent in 1993, but diminished to 31.0 percent in 1994. Compared to the sales of these two kinds of products, the sales of fur products were relatively stable, ranging from 33.8 percent in 1991, 26.2 percent in 1992, 21.8 percent in 1993, and 35.7 percent in 1994 (Table 3). This indicates that the hunting section was the most reliable source of income for the farm, even during the most critical period.

In contrast to these three kinds of products or activities, other products quickly lost their significance in the management of the farm. Decreases of other hunting-gathering products, like wild animal meat and wild berries, were especially obvious in 1992, when the share of their sales dropped from 27.6 percent in 1991 to 5.6 percent in 1992, and have not yet recovered (Table 3).

As a result, one can draw the following conclusions upon analysis of the management of the state farm in Krasnyi Yar during the most critical period just after the collapse of the Soviet Union (1992–94). First, the balance between each productive section dropped in 1992. Second, the main sources of the farm's income changed every year during this period, while the fur section maintained its position as the most reliable income-generating product. Third, the farm lost the diversity of its products. In other words, it survived the most dangerous period at the expense of its productive diversity. The percentages of sales of each product in 1994 looked as if the farm, which was reorganized into a private company in this year, tried to reestablish its productive system on the basis of three main sections: fur, timber, and services. However, various conditions did not allow it to do so.

The percentage of fur products went down from 35.7 percent in 1994 to 7.9 percent in 1995, and since then it has not recovered (Table 5). It may be inappropriate to compare the percentages in 1994 and 1995, because they do not share the same basis of statistical data. For example, total sales jumped from 83,198,400 roubles in 1994 to 244,106,800 roubles in 1995 (Table 5), although the period of hyperinflation in Russia was nearing its end in these years. The sort of

statistical data gathered and their analysis might have also changed after the reorganization of the enterprise. However, the output and sales from the hunting of fur-bearing animals actually diminished. For example, the company sold 498 pieces of sable fur and 5,884 squirrels in 1994, while it sold only 348 and 1,393, respectively, in 1995 (Tables 5 and 6). The productive output of squirrel fur peaked in 1994, and gradually went down to 468 pieces in 1998. The sales of fur dropped from 29,672,700 roubles in 1994 to 19,219,900 roubles in 1995, regardless of the rise of the unit price of fur. For example, the price for sable fur rose from 20,490 roubles in 1994 to 40,340 roubles in 1995, as shown in Table 6-3.

The decrease of the output and sales of fur products in 1995 had much to do with the decline of fur production in Russia. One can point out several reasons. First, the economic disorder after the collapse of the socialist system damaged fur-producing enterprises (private companies, co-operatives, and collective farms). Second, the drop in demand for fur in the world market, influenced by anti-fur campaigns and the development of synthetic materials that replaced fur, pushed down prices to even lower levels. Third, the rivalry between domestic and foreign producers also restricted fur prices, although the Russian market is still the largest in the world, while others are diminishing. It was a matter of course that foreign traders and producers dashed into the Russian fur market when it was opened up to them, especially Italian and Chinese traders and producers. Fourth, hyperinflation rapidly pushed up the costs of fuel, hunting equipment, and transportation, and put a huge burden of expenses or debts on the backs of the enterprises. Under these difficult economic conditions, the more fur they produced, the more expenses and debts they incurred. So, many enterprises, farms, and co-operatives in indigenous areas gave up on producing fur.

Table 5. Sales of fur and timber products (1991–1998) in thousands of roubles (roubles since 1998).

Year	1991	1992	1993	1994	1995	1996	1997	1998
Squirrel	8.5	34.0	1,719.6	7,461.2	2,611.6	3,528.8	2,374.5	2,918.0
Weasel	3.1	20.8	147.9	605.3	825.0	768.0	569.8	857.0
Mink	4.0	207.3	1,331.8	1,488.0	1,745.3	2,688.8	2,880.5	4,680.0
Sable	129.4	977.1	2,802.4	10,203.6	14,038.0	15,094.0	21,194.0	27,880.0
Others	72.7	625.7	3,128.3	9,914.6		85.5		
Sales of fur products	217.7	1,864.9	9,130.0	29,672.7	19,219.9	22,079.6	27,018.8	36,335.0
Sales of timber products	70.0	2,910.0	4,304.9	18,223.0	62,383.5	44,650.0		
Total sales	643.4	7,104.8	41,822.1	83,198.4	244,106.8	688,677.0	567,807.3	369,000.0
Percentage of fur sales	33.8%	26.2%	21.8%	35.7%	7.9%	3.2%	4.8%	9.8%
Percentage of timber sales	10.9%	41.0%	10.3%	21.9%	25.6%	6.5%		

Percentage of sales of a particular sort of fur compared to total sales of fur products

Squirrel	3.9%	1.8%	18.8%	25.1%	13.6%	16.0%	8.8%	8.0%
Weasel	1.4%	1.1%	1.6%	2.0%	4.3%	3.5%	2.1%	2.4%
Mink	1.8%	11.1%	14.6%	5.0%	9.1%	12.2%	10.7%	12.9%
Sable	59.4%	52.4%	30.7%	34.4%	73.0%	68.4%	78.4%	76.7%
Others	33.4%	33.6%	34.3%	33.4%	0.0%	0.4%	0.0%	0.0%

Source: Author.

Table 6. Sales and unit prices of fur (1991–2001).

Table 6-1. Fur output (1991–2001).

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Badger	1	2	19	2							
Squirrel	2,206	1,340	4,597	5,884	1,393	1,221	535	468	333	328	320
Wolf		1									
River otter		1	1								
Raccoon	1	1	6			2					
Hare	11	6	2								
Weasel	198	133	152	222	218	129	79	93	56	60	62
Marten	1		2								
Mink	74	199	246	161	50	60	65	104	89	220	15
Musk rat			3	9							
Sable	607	745	408	498	348	224	295	243	198	600	158

Source: Author.

Table 6-2. Fur sales (1000 roubles 1991–1997. Roubles 1998–2001. Rouble was reduced 1/1000 in 1998).

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Badger		1.5	34.1	13.5							
Squirrel	8.5	34.0	1,719.6	7461.2	2,611.6	3,528.3	2,374.5	2,918.0	1,809.0	13,520.0	25,600.0
Wolf		0.1									
River otter		2.2	7.5								
Raccoon	0.1	0.3	34.5			85.5					
Hare	0.0	0.0	0.1								
Weasel	3.1	20.8	147.9	605.3	825.0	768.0	569.8	857.0	1,055.0	4,800.0	4,960.0
Marten			4								
Mink	4.0	207.3	1,331.8	1,488	1,745.3	2,688.8	2,880.5	4,680.0	4,970.0	26,400.0	2,225.0
Muskrat			4.8	10.2							
Sable	129.4	977.1	2,802.4	10,203.6	14,038.0	15,094.0	21,194.0	27,880.0	40,400.0	480,000.0	134,300.0

Source: Author.

Table 6-3. Unit prices of fur (the rouble was reduced in 1/1000 in 1998).

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Badger		750	1,795	6,750							
Squirrel	3.85	25	374	1,268	1,875	2,890	4,438	6.24	5.43	41.22	80.00
Wolf		100									
River otter		2,200	7,500								
Raccoon	100.00	300	5,750			42,750					
Hare			50								
Weasel		156	973	2,727	3,784	5,953	7,213	9.22	18.84	80.00	80.00
Marten			2,000								
Mink	54.05	1,042	5,414	9,242	34,906	44,813	44,315	45.00	55.84	120.00	148.33
Muskrat			1,600	1,133							
Sable	213.18	1,312	6,869	20,489	40,339	67,384	71,844	114.73	204.04	800.00	850.00

Source: Author.



For example, in northern Yakutia (in the Eveno-Bytantai region in the Republic of Sakha), fur was one of the main products of the state farm, Sovkhoz (named Lenin), in this region. It had a hunting section and employed 15 to 29 professional hunters to carry out the state fur production plan. Moreover, it constructed and managed a fox-breeding farm. However, the negative conditions surrounding fur production made it impossible for the farm to keep the hunting and fox-breeding sections. They were closed in 1996 and the hunters lost their jobs. The republic government recognized incidents like this as a crisis for the traditional cultures of the northern minorities and established an enterprise, named “Sakha Burt” (which means Yakutian hunting), to monopolize the fur trade in the republic to save the minorities from the crisis. In the new enterprise the government made a contract with hunters of ethnic minorities through the enterprise and bought fur from them at comparatively better prices. At the same time, the enterprise supplied the hunters with various equipment at reduced prices, including guns, bullets, powder, parts for transport vehicles, and fuel. The enterprise initially looked as if it would be successful. However, even this system did not function properly. When the author visited Yakutsk (the capital of the republic) and the Eveno-Bytatai region in 1998, the enterprise had downsized the system of supporting minority hunters, and had turned into an ordinary privatized company, solely pursuing its own profit.

The natural conditions of Krasnyi Yar are much better than that of the Eveno-Bytantai region, because the faunal diversity is much larger. This plays an especially decisive role whether sable populations survive or not. Sable fur has not lost its value in Russia, even today. The government controls its production to conserve this precious natural resource. The Eveno-Bytantai region is located in the area outside the sable’s habitat, which is the weakest point of the hunters there.

Regardless of possessing the sable resource, the ethnic hunting company in Krasnyi Yar has been shifting away from the fur trade to other products and activities since 1995, as if it had realized that hunting fur-bearing animals would not pay in the future. What will be its new main product? The role of timber products will be limited, though the outputs of the timber section in 1999 and 2000 were restored to the 1992 level (Table 4). The company will not adopt a management strategy largely depending on timber, because it would mean logging the forests of the hunting territories to increase productivity. Judging from the output data of each section of the company, one can guess that they are trying to restore the diversity of its products to overcome the present difficulties and avoid future crises by conserving their forest resources. For example, it has increased the production of edible wild plants and medicinal herbs. According to recent data (Table 4), the enterprise produced dried ferns (210 kg in 1999; 193 kg in 2000), cowberry leaves (285 kg in 1999; 290 kg in 2000), and *Eleutherococcus* roots (4,000 kg in 1999; 10,000 kg in 2000). Though data on their sales was not available, these products may provide the company with a substantial income. Collecting useful plants from the wild can be identified as one of the third ways of forest usage. However, one must always pay attention to the fact that wild plant collecting implies a danger of overexploitation of resources, as with hunting and timber-cutting.

Ecological tourism can also be included in the third way of forest usage. The enterprise in Krasnyi Yar conducted tours to the upper part of the Bikin River in 2000 and 2001 with support from NGOs. The hunters took Japanese tourists to their hunting territories and introduced them to the nature of their forest. Of course there are many problems with such tours, and project organizers should establish tour manuals educating tourists about not disturbing or exploiting the forest.

### **3-3 Contemporary problems of hunting in Krasnyi Yar**

As mentioned above, hunting by using the traditional techniques of the indigenous people can be one of the styles of sustainable forest usage. In fact, the indigenous hunters in the Russian Far East have long demonstrated evidence of this. Their ancestors were included in the economic and political systems of East Asia, controlled by Imperial China, for hundreds of years. Though they caught a large amount of fur animals for the payment of tribute and for trade with merchants, the resources were never completely exhausted through overexploitation, as if the hunters understood the concept of sustainable forest usage.

However, the situation has rapidly changed since the middle of the nineteenth century. Some species, like sable, musk deer, and bear, have often fallen into danger of extinction because of overkilling, deforestation, and other

ecological problems. Recently, forest fires have posed a serious problem for the protection of forest animals. One can say that the crisis and depletion of the forest animal resources was caused by the change in the characteristics of hunting activities forced by modernization. For example, modernization has always been accompanied by a special style of economy, named capitalism, which requires quantity-oriented productivity and efficiency. The economic conditions of the Russian Far East at the end of nineteenth century and the beginning of the twentieth century were not the exception. Vast forests were logged for the development of farms or the exploitation of minerals, and new-comer hunters enthusiastically hunted wild animals in the conserved forests. The government and merchants believed that the logging and the exploitation of natural resources would provide them with huge profits.

This chaotic situation rapidly ended because of the overexploitation of resources. The socialist government, established by the October Revolution in Russia, could have adopted the policy of sustainable forest usage, because it was not necessary for it to pursue economic "profit." All productive activities were restricted by the state plan. If the government established a hunting plan within the restorative power of the forest, the resource could not be overexploited or wasted. In fact, some fortunate forests and communities like Krasnyi Yar, which were defined as areas of traditional foraging, survived, while the Soviet government destroyed many other forests and indigenous communities, which were defined as targets of socialist development. Though the socialist economy required quantity-oriented productivity as much as the capitalist system, it was more limited.

However, the collapse of the Soviet Union carried primitive capitalism that required limitless productivity and profits even into the conserved forests and communities. Hunters had to capture as many animals as they could in order to survive during the crisis period. The changes in the amount of the fur-bearing animals sold clearly demonstrate the struggle of the hunters and the farm against the economic crisis. As shown in Table 4, 5, and 6, the farm and the company sold many squirrels up until 1996, peaking in 1994 at 5,884 pieces, while the amount of sable fur slowly declined after its peak in 1992 of 745. The sales of squirrel fur (7,461,200 roubles) approached the sales of sable (10,203,600 roubles) in 1994. From these data, one can conjecture on the following two things. First, the hunting section of the farm fell into crisis because of a shortage of precious sable fur, so it tried to make it up with the large amount of squirrel fur. Possibly, the hunters might have been reluctant to supply the company with sable, because it would have been more profitable for them to sell it on the black market. Second, the results of hunting were actually poor after 1992, because of either disappearing resources or a lack of motivation on the part of the hunters.

After the reorganization in 1994, the output and sales of squirrel fur dropped rapidly, while those of sable and mink were beginning to return to 1991 and 1992 levels. The drop in output of squirrel furs was especially obvious in 1997, although the decrease in sales was comparatively slow, because the unit price rose over the five years. Generally, the unit price for squirrel fur is so low that it produces little profit in the capitalist or market economy. When there were no other alternatives, such as during the economic crisis between 1992 and 1994, the farm and the hunters had to put up with capturing and selling the less expensive fur in large quantities. However, it is natural for them to capture and sell more expensive and profitable furs as far as ecological and economic conditions allow. The data of the changes of the output and sales of fur in these ten years show that the motivation of hunters for supplying the company with sable fur was restored several years after the reorganization of the state farm.

However, the hunting section of the company now has another serious problem: the absence of successors of the older hunters. As shown in Table 7 and Figure 2, the number of hunters has decreased over the last ten years. For example, while 50 professional hunters worked in 1991, only 24 hunters, less than 50 percent, remained in 2001. It is said that there are many amateur hunters in the village and that they sometimes overexploit or deplete the animal resources in the hunting territories. While some of them were previously professional hunters with good techniques and considerable traditional knowledge, others are engaged in sport hunting, hunting as a side job, or for recreation. Especially just after the collapse of the Soviet Union, when food shortages in the village were very serious, many people went into the forest to capture large mammals for meat, which promoted the overexploitation of the animal resources. However, now it is urgent that the company should employ well-trained hunters, who have good techniques and considerable knowledge about animals and the forest, if the company wants to strengthen the ecological tourism section. Only the good hunters can safely guide the tours to ensure good experiences.

Table 7. The population and percentage of hunters in the company.

Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Administration	10	7	7	9	11	11	10	6	13	13	13
Hunters (professional)	50	50	47	44	43	45	34	32	34	28	24
Hunters (non-professional)									29	29	29
Engineers, workers, and others	56	40	23	20	23	28	28	36	77	73	59
Total	116	97	77	73	77	84	72	74	153	143	125

Source: Author.

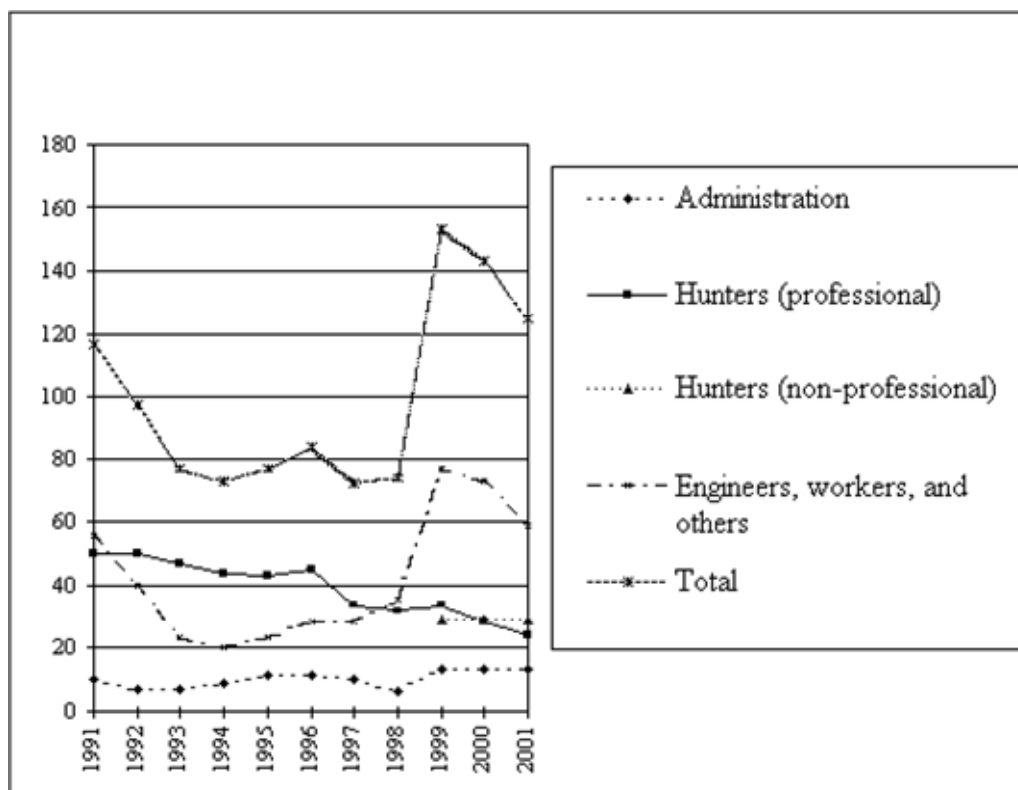


Figure 2. Population of company employees.

The absence of young, well-trained hunters is very serious. In an interview with a young professional hunter, he said that of the youth of his generation, he was the only one who became a hunter and that the others left the village to find jobs in cities like Luchegorsk or Vladivostok.

In order to be a good hunter, it is necessary to have been taught by the nearest male relatives since one's childhood. All the good hunters, including the young professional hunter, gained much experience by being taught by their fathers, uncles, or elder brothers. They demonstrated their techniques to their young pupils, explained them in words, and sometimes let them experience some of the hardships of the forest. In these educational processes young hunters learned various traditional techniques and knowledge that has been passed on through many generations. Establishing a good education system is an urgent task for the company in the near future in order to develop ecological tourism, as well as to continue with hunting and gathering.

Finally, two more problems should be raised here. What is the "traditional hunting" of the Udeghe people? And what role can it play in establishing sustainable usage of their forests?

Though the terms “tradition” or “traditional” have been used a priori in this report, they are impossible to strictly define. For example, the term “traditional trap” was often used in this report. However, in the strict sense of the term, all the “traditional traps” of the Udeghe are not purely traditional. For example, as mentioned in another article (Sasaki 2001, 14), the typical dead-fall type trap, *Dui*, might have been imported from China, because the name appears to have come from a Chinese word, and also because some old Udeghe hunters have identified it as a trap of Chinese origin. The release mechanism of the *Kafari* could have been originally devised in Eastern Europe and distributed through Siberia to the Far East. And the mechanism and techniques of the loop traps are common among the people of North Eurasia. The ancestors of the present-day Udeghe people combined their original and imported equipment and techniques to establish more effective “traditional” ones, in order to strengthen their productivity and to adapt themselves to changing socio-economic conditions.

Therefore, it may be inappropriate to say that the techniques and devices, which the hunters of the younger and middle generations in Krasnyi Yar described to us, are “not traditional” because of their usage of iron traps. They, in fact, consist of many elements and knowledge passed down through generations among the Bikin Udeghe, as well as equipment of foreign origin.

Though it is difficult to define “traditional hunting,” it is clear that we should reevaluate it, not from the point of view of cultural authenticity, but from that of the sustainability of forest usage. One can identify various devices and knowledge for continuous fur production in the “traditional” hunting techniques and equipment. For example, an old hunter showed us that he could capture a fixed sort and size of animals with his “traditional” dead-fall traps by controlling the size and the strength of the release mechanism.

However, it is problematic to say whether the hunters were conscious of sustainability or not. They might have tried to capture a fixed sort and size of animals only because the larger animals had fur of high quality and provided them with more income. When they had captured too many animals in a season, they might have had a serious crisis in the next year. Even if the selection of game through the control of the trap had prevented them from depleting the resource, and if they had been conscious of the importance of resource conservation, they may not have been able to scientifically explain the relationship between their techniques and sustainability. Therefore, the scientific analysis of their techniques and equipment, both traditional and present, is one of the more urgent tasks for researchers.

There are two directions for the analysis. One is the purely objective analysis on the basis of ecology, biology, forestry, technology, and economy. Quantitative analysis is inevitable in this case. The other is the analysis of the discourses of the Udeghe people. Researchers should clarify their recognition of nature, the forest, resources, techniques, equipment, and so on, through interviews and observation. It is a task for anthropologists and ethnologists, and it will be more effective with the support of ethno-zoology and ethno-botany. An interdisciplinary study will support the development of the study of hunting (or foraging as a whole) from the point of view of sustainability.

#### 4 Conclusion

In conclusion, those concerned with forest conservation in the regions of the indigenous people in the Russian Far East should recognize the following:

1. The prejudice that indigenous people, including the Udeghe in the Khabarovsk and Primor’e regions, are “primitive” in their culture and society should be recognized and discarded.
2. Their foraging activities (hunting, fishing, and gathering) have been connected to the economy of the East Asian world since at least the near-modern era (since the seventeenth century). They have adapted themselves to the changes of socio-economic systems from the pre-modern East Asian system through to the primitive capitalism of Imperial Russia and socialism of the Soviet Union to the present market system.
3. Natural resources are not equally distributed in space and time. Indigenous hunters always tried to produce various products, depending on the seasons, places, and purposes, using different techniques and equipment. They know the diversity of products prevents them from falling into serious crisis.
4. The state farm in Krasnyi Yar produced various products in the Soviet regime: fur, wild animal meat, edible plants, medicinal herbs, honey, dried ferns, vegetables, timber, and other processed products. The farm lost its diversity

of products during the crisis just after the collapse of the Soviet Union, but it can be said that it survived at the expense of the diversity. Now the company, the privatized former state farm, is developing new productive sections to restore the diversity of its products.

5. The privatization of the state farm in Krasnyi Yar can be identified as a successful case, compared with the other cases in the regions of the indigenous people in Siberia and the Far East, because the privatized company survived during the most critical period.

6. The company has tried to give up its “traditional” constitution largely depending on the hunting of fur-bearing animals. Instead, it is developing the resources of edible plants, medicinal herbs, and ecological tourism. However, both activities need in-depth and comprehensive knowledge of the nature of the region, on par with the hunters’ knowledge. The company faces another serious problem with the shortage of well-trained young hunters.

7. The “traditional” and modern techniques, equipment (traps, spears, nets, and guns), and knowledge, which professional or formerly professional hunters have developed and passed on until now, should be scientifically analyzed using both objective methodology and discourse analysis. These studies will support the company and the villagers in the development of an educational system for young hunters and the sustainable use of their forests.

## References

- Albert, F., 1956. *Die Waldmenschen Udehe*, Darmstadt.
- Brailovskii, 1901. Tazy ili udihe, *Zhivaya starina*, 11(II), pp. 129–216, 11(III), pp. 323–432, Sankt Peterburg.
- Fu, Heng, 1761. *Handbook of Tribute Payers of Imperial Qing* (copied and printed in 1991 by Liao Shen Shu She)(傳恆編『皇清職貢圖』1991年影印, 瀋陽: 遼瀋書社).
- Lar’kin, 1957. *Udegeitsy*, Vladivostok: Akademii Nauk SSSR, Sibirskoe otdelenie, Dal’nevostochnyi filial. Regional Archive of Liao Nin Sheng, Institute of History of Liao Nin Academy of Social Sciences, and Museum of Former Imperial Palace of Shen Yan, eds.
- Matsuura, S., 1997. The change of the people in the middle reaches of the Amur River in the eighteenth century: on the immigration of the Eight Clan and Seven Clan Heje, *Toyo Gakuho, the Journal of the Research Department of the ToyoBunko* 79(3), pp. 1–32 (松浦茂「一八世紀のアムール川中流域における民族の交替 八姓と七姓ヘジェの移住をめぐって」『東洋学報』79巻3号, pp.1–32).
- Patkanov, S., 1906 *Opyt geografii i statistiki tungusskikh plemen’ Sibiri na osnovanii dannykh perepisi 1897 g. i drugikh istochnikov*, chast’ II, prochie tungusskie plemena, (Zapiski imperatorskogo russkogo geograficheskogo obshshesva po otdeleniyu etnografii, tom XXXI, chast’ II).
- Regional Archive of Liao Nin Sheng, Institute of History of Liao Nin Academy of Social Sciences, and Museum of Former Imperial Palace of Shen Yan eds., 1984. *Manchurian Archives of Administrator’s Office in Ilan Hala*, Shen Yan: Liao Shen Shu She (遼寧省档案館他編『三姓副都統衙門滿文档案訳編』瀋陽: 遼瀋書社).
- Sasaki, S., 2000. Fur animal hunting of the indigenous people in the Russian Far East, history, technology, and the economic effects. In Inoue, M. and H.Isozaki (eds), *A Step Toward Forest Conservation Strategy (1)*, Interim Report 1998, IGES Forest conservation Project, Institute for Global Environmental Strategies (IGES), pp.495–513.
- Sasaki, S., 2001. Comparative study of hunting techniques of the native people of the Lower Amur basin and the Primor’e region: with the focus on traps for fur game animals. In Hokkaido Museum of Northern Peoples (ed.), *The Proceedings of the 14th International Abashiri Symposium*, Abashiri: Association for the Promotion of Northern Cultures, pp.11–21.
- Shrenk, L., 1883 *Ob inorodtsakh amurskogo kraya*, tom 1, Sankt Peterburg.
- Taguchi, H., 1998 Life and hunting activity of the Udeghe people in the Primor’e region in Russia: focusing on the influence of the fur trade on the hunting techniques, especially on the trap hunting. In Sato, H., (ed.), *Hunting Culture in Russia*, Tokyo: Keiyusha. (田口洋美「ロシア沿海州少数民族ウデへの狩猟と暮らし」佐藤宏之編『ロシア狩猟文化誌』東京: 慶友社).
- Taguchi, H., 2000. The hunting and fishing activity of the indigenous peoples in the Amur basin. In Fujimoto, T. (ed.), *The Report of Joint Research on the Natural Settlements in the Far East*, Niigata: Faculty of Humanities, Niigata University. (田口洋美「アムール川流域における少数民族の狩猟漁撈活動」藤本強編『ロシア極東少数民族の自然集落に関する国際共同研究』新潟: 新潟大学人文学部).

