TRAPPING A LIVING:

CONSERVATION AND SOCIO-ECONOMIC ASPECTS OF THE FUR TRADE IN THE RUSSIAN FAR EAST

by Natalia DRONOVA
and Alexander SHESTAKOV

A TRAFFIC EUROPE-RUSSIA REPORT

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Hunter's path through wintry forest (TRAFFIC Europe-Russia / Alexey Vaisman).

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EXECUTIVE SUMMARY

Background

Hunting for fur has been practised in the Russian Federation for many centuries and has played an important role in the economy of the State. In medieval times, furs were used as a form of payment and the USSR was recognised as the world's largest supplier of high-quality furs, when auction sales were worth around USD150 million. Since the breakdown of the USSR, regulation and organisation of hunting for fur and trade in furs has changed significantly as the centralised and State-controlled system ceased to exist and private trade in furs was allowed while no adequate legislative or administrative measures were in place yet to monitor and control this new commercial system. This resulted in increased levels of uncontrolled harvest and trade in furs and, as a consequence, a larger number of furs of lower quality were offered on the market. This, together with a decreased demand for furs in traditional Western markets in the early 1990s, resulted in a dramatic reduction in the prices for fur. As a consequence, most former co-operative or industrial State hunting enterprises went bankrupt, and hunters' incomes decreased significantly. This coincided with the liberalisation of Russian foreign trade and a growing demand for animal and plant products for traditional East Asian medicine. Reports in recent years have suggested that these factors have had negative socio-economic and conservation impacts in some regions in the Russian Far East. For example, it has been suggested that hunters who used to hunt for small fur-bearing mammals, such as Red Squirrels *Sciurus vulgaris* and Sable *Martes zibellina,* have started to hunt also other species that are of higher value such as Brown Bear *Ursus arctos*, Asiatic Black Bear *Ursus thibetanus*, Siberian Musk Deer *Moschus moschiferus* or Amur Tiger *Panthera tigris altaica* or to the harvest of protected plants, such as Russian Ginseng *Panax ginseng*.

The aim of this study was to review socio-economic trends and aspects of hunting and trapping for fur in the Russian Far East, to better understand what role recent socio-economic changes might have played in the increased exploitation of wildlife species of conservation concern. It is hoped that the information and recommendations presented in this report will assist relevant bodies at regional, federal and international level in adopting measures that will help enhance the management of game species and in particular the potential conservation role of their legal and sustainable use in the Russian Far East in order to attempt to reduce the hunting pressure on less-abundant species in this important eco-region.

The study concentrates on areas in the south of the Russian Far East (Khabarovskiy and Primorskiy Kray, Amur Oblast and Jewish Autonomous Oblast). These areas were chosen because they are traditionally important areas for hunting and trapping for fur. Around 15-20% of all furs harvested in the Russian Federation originate from this part of the country and illegal harvesting of and trade in protected animals and plants, mostly to supply demand for traditional oriental medicines, has been reported to be increasing since the break-up of the Soviet Union.

Information was collected from various sources including scientific publications, governmental reports and gray literature. In addition, market surveys were carried out in different locations in the Russian Far East and information on socio-economic aspects was collected through standardised interviews and questionnaires with local hunters. In total, 308 persons belonging to 53 large and small villages in Primorsky and Khabarovskiy Kray responded. The present report is a short version of the original and more comprehensive report in Russian, published by TRAFFIC Europe-Russia in March 2005.

"Game species" population trends

Analysis of population trends of various fur-bearers in the south of the Russian Far East showed that populations of Red Squirrels, Siberian Weasels *Mustela sibirica*, Eurasian Otters *Lutra lutra*, Ermines *Mustela erminea* and Amur Leopard Cats *Prionailurus euptilura* had declined while populations of Wolves *Canis lupus*, Eurasian Lynxes *Lynx lynx*, Raccoon Dogs *Nyctereutes procyonoides,* Sables *Martes zibellina*, Red Foxes *Vulpes vulpes* and Mountain Hares *Lepus timidus* were stable. The population status of Muskrats *Ondatra zibethica,* Wolverines *Gulo gulo* and Brown Bears *Ursus arctos* is unclear.

Harvest levels of several fur-bearing mammals have exceeded annual quotas. A comparison of the number of Sable skins presented at the auction in St Petersburg in 2003 and the overall official harvest for Sable suggests that 112 000 animals have been harvested illegally, over and above quota levels.

Between 1991 and 1996, considerable changes occurred in the market shares of various species hunted or trapped for their fur. The share of Sable skins sold increased from 48% to 60%, owing to the relatively stable demand for Sable on the international market compared to a decreasing demand for furs from other species. For example, a comparison of procurement data from before the break-up of the USSR (1986 to 1990) and after (1995) revealed a 27-fold decrease in the supply of Mountain Hare skins. For other species the decrease were less drastic, but still significant - twelve-fold for Muskrats, eleven-fold for Ermines, eight-fold for minks, seven-fold for Eurasian Otters and Red Foxes, six-fold for Red Squirrels, five-fold for Eurasian Lynxes and Raccoon Dogs, and almost three-fold for Siberian Weasels. In the early 2000s, Sable, Red Squirrel, Wolverine and Eurasian Lynx are the fur species in most demand on the international market, followed by Siberian Weasel, Ermine and Red Fox.

Fur prices and volume

Overall, prices for Russian furs have declined significantly since the 1980s. An analysis of sales dynamics at the St Petersburg international fur auction from 1987 to 2003 revealed a decrease in the number and price of wild Sable furs in trade between 1991 and 1996. The most significant price drops have been observed for Sable furs, for which prices fell by around 50% between 1990 and 1997, from USD181 per skin in 1987, to USD59 in 1995. This drop is largely associated with the decreased demand for high-quality furs on the international markets and the elimination of the State monopoly on fur trade in the Russian Federation. This resulted in a shift in the market to lower quality furs that were marketed to a different consumer group.

In 1997, sales volumes of wild Sable furs increased and, since then, a stable growth in the number of skins sold has been observed (from 130 000 skins in 1996, to 275 000 skins in 2002). This noticeable increase was not accompanied by an increase in price and instead the average price per skin stabilised at a relatively low level of about USD50, almost a quarter of the price recorded in 1986. Therefore, the overall value of the fur trade has decreased despite an increase in the trade volumes.

International and domestic fur markets

Until the mid-1980s, the USSR was recognised as the world's largest supplier of high quality furs. The annual turnover of fur offered at auctions in the former USSR reached USD150 million. However, after the break-up of the USSR the annual turnover dropped by almost 75% to USD34.6 million in 1992 and was only USD14.3 million in 2001. Among the 18 species most commonly used in the Russian fur trade, Sable fur is the most valuable (USD56 per skin in 2003) and accounts for 50 to 60% of the market. Red Squirrel skins are also important, claiming around 20% of the market and have been in stable demand in recent years. However, the value of squirrel skins is much lower than that of Sable skins and prices offered at auctions average USD2 per skin.

Historically, the UK, the USA, Italy, Hong Kong and Greece have been the most important importers of the Sable skins from the Russian Far East. However, since the late 1990s, China has become an important and

rapidly growing market, in particular, for Red Squirrel skins. Illegal international trade in furs has been recorded and between 1991 and 2003 several thousand skins worth about USD160 000 were confiscated at the southern borders of the Russian Far East, mostly as a result of violations of fiscal, not environmental, legislation.

Examination of harvest data and harvest quotas indicates a high probability that the St Petersburg auction is supplied not only with legally harvested furs, but also with illegally harvested furs not recorded in any official statistics, i.e. fur from animals hunted in excess of official quotas.

The domestic market for furs in the Russia Federation is still relatively large. However, many fur products on sale in the Russian Federation are imported from other countries. Often the imported products have been produced from fur originally harvested in Russia. Surveys of the fur market in Vladivostok between 2002 and 2003 revealed that about 80% of fur goods there had been imported. Locally produced furs are mainly used for hats and caps from skins of wild and farmed minks (60% of the products), Raccoon Dogs (20%), Eurasian Badgers *Meles meles* (10%) and Arctic Foxes *Alopex lagopus* (10%); only a few hats were made of Sable fur.

In 2003, 85% of furs in the world originated from breeding farms. The number of fur farms in the Russian Federation has halved between 1991 and 2003, at which time 150 farms remained, producing around 20 000 to 25 000 Sable skins. In the early 2000s, the Russian market consumed up to 35% of farmed furs produced world-wide and the share of Russian furs in this sector of the fur market amounted to less than one-third.

Socio-economic characteristics and changes in the Russian Far East

Hunting has been an important activity in the Russian Far East for the majority of the local communities. Despite the decreased demand for furs internationally, the number of hunters has not decreased over the last 15 years and has even slightly increased. For approximately 25% of the 308 hunters interviewed during this study hunting is their main income-generating occupation, and about 15% appeared to be professional hunters. For 75% of those interviewed, the income from wildlife harvested in the taiga constituted at least half of the family's budget and for 20% of the hunters it was the primary source of income. This share was considerably larger in families of professional hunters, where for 94% the profits made from the use of wildlife made up more than a half of the family income. Nineteen per cent of the hunters interviewed were representatives of indigenous communities (the Udege, Nanai, Orochi, etc.).

Most furs are purchased by individual Russian agents (35%) or Russian trade companies (34%) and occasional buyers purchase around 26% of the furs. The latter group often appear to be middlemen selling furs to Chinese businessmen. A small number of furs (5%) are bought directly by foreigners.

In the past 20 years, hunters have experienced a three to five-fold reduction in their profits per Sable skin. During Soviet times the harvest of around 100 to 120 Sable skins per season ensured a prosperous income for the hunters family. However, nowadays, the profits from the sale of 100 Sable skins amount to around USD2400 a year, which represents the official minimum subsistence level for a family of four.

Potential impact on other wildlife in the Russian Far East

Due to the various factors that have influenced the livelihoods of hunters in the Russian Far East, it is difficult to judge to what extent the changes in the fur trade contributed to an increased exploitation of endangered species. Soon after 1992, after the borders to neighbouring countries were opened, foreign trade developed, and governmental border controls were weakened. At the same time, the state-controlled marketing of and trade in fur collapsed, prices for furs decreased dramatically and demand for other wildlife species from the Russian Far East for traditional medicine in neighbouring countries increased. Prices for these species were often higher than those of the species traditionally hunted and trapped for fur. Because of the changes in hunters' lives and incomes, some hunters started to also trap and collect more "profitable"

species and products. International demand for parts and derivatives of plant and animal species from the Russian Far East, especially for use in traditional Asian medicine, has stimulated new and often illegal types of wildlife harvest. For example, 13% of the interviewees admitted that they have hunted bears and sold their paws and gall bladders to Chinese customers, 10% admitted that they hunted musk deer for their pods and three hunters admitted that they had sold Tiger bones and hides. The majority of the hunters interviewed noted that it was more profitable for them to hunt for species of higher commercial value, often because they were rarer, such as Brown Bear *Ursus arctos*, Amur Tiger *Panthera tigris* or for large ungulates such as Siberian Musk Deer *Moschus moschiferus*, rather than for the small and abundant fur-bearing mammals, such as Sables and Red Squirrels. Based on information from the hunters interviewed, ginseng harvest is the most profitable. Russian Ginseng *Panax ginseng* is listed in the Red Data Book of the Russian Federation and CITES Appendix II. Its harvest is prohibited. Information gathered during interviews indicates that the root of this rare plant is harvested by 68% of hunters.

Recommendations

The report demonstrates that there have been numerous political and economic factors that have influenced the livelihoods of traditional hunters in the Russian Far East since the break-up of the USSR. In the late 20th century, the fur trade in the Russian Far East has undergone some dramatic changes that have impacted the livelihoods of many hunting communities in the region. While some of the findings of the report suggest that hunting for fur remains a strong tradition and continues to play an important role in supporting the livelihoods of local communities in the Russian Far East, they also document certain shortcomings in the current management of the harvest of and trade in fur. The opening of the borders in the early 1990s facilitated trade between the Russian Far East and other East Asian destinations, such as Japan and China, where the rising economy has stimulated the demand for certain animals and plants, particularly those used in traditional medicine. This in turn has led to an increased exploitation of protected species in the Russian Far East. Although it is difficult to evaluate to what extent changes in the fur industry and markets have led to an increased exploitation of wild fauna and flora in the region, these factors must be taken into account because they played a major role in the region's economical transition and consequently impacted hunters' behaviour. Therefore, the following recommendations also aim to improve the regulation and management of hunting for and trade in fur in the Russian Far East in order to ensure their ecological and economical sustainability and thereby reduce hunters' pressure on wildlife that is protected and threatened.

Directed to governmental bodies in the Russian Federation and neighbouring countries

To address scientific aspects of the game hunting and trapping for fur

- Organise population monitoring for species that are hunted for their fur in order to have readily available data that are necessary to identify and properly address potential declines in population as a result of over-harvesting and take the adequate precautionary measures, such as setting size, seasonal and hunting grounds limits.
- Conduct a census of Sable populations throughout the Russian Federation using modern and improved methods, with joint participation by the All-Russia Institute of Game Management and Fur Farming and the *Tzentrokhotkontrol* State Department. This will provide necessary baseline information for establishing more justifiable allocation of hunting quotas.

To address legislative aspects of game hunting and trade in fur

- Develop a legislative framework that will facilitate the long-term assignment of hunting grounds to individual hunters and hunters' associations that do not represent legal entities.
- Urgently ratify the *Agreement on International Humane Trapping Standards*.
- Assess the feasibility of establishing a centralised auction marketing system for the sale of furs legally harvested in the Russian Far East.

- Offer a range of official economic incentives that encourage hunters to supply and traders, including exporters and importers (e.g. in China), to sell and purchase legally harvested furs at auctions under such a system.

To address management and control aspects of game hunting and trade in fur

- Introduce compulsory skin marking with non-removable numerical labels that will be given to hunters together with their licence. The Russian Federation could also examine lessons learned from measures taken in Canada and the USA where systems of labels linked to licenses exist. The marking of skins will help to improve efficiency in controlling the hunters' compliance with harvest levels.
- Undertake the necessary research to develop alternative trapping methods for hunters, particularly those from indigenous communities, and promote the urgent replacement of leghold traps, which are prohibited by the *Agreement on International Humane Trapping Standards*.
- Strictly control the number of furs entering international fur auctions and enforce existing hunting regulations (i.e. prevent animals hunted in excess of quotas from entering the legal marketing and trading system).

To address the illegal harvest and trade in protected wildlife

- Adopt administrative measures, in the Russian Federation and neighbouring countries, that formalise cross-border collaboration and co-operation among enforcement authorities responsible for the control of wildlife trade regulations through the development of tools for the exchange of information and data, facilitate staff visits, exchanges and regular meetings to discuss common enforcement challenges.
- Allocate the necessary budgetary resources to the implementation and enforcement of existing legislation for the protection of 'rare' species (such as tigers, leopards, ginseng, etc.) and the regulation and management of hunting species (such as musk deer and bears). The consolidation of specialised anti-poaching units in key-problem areas is recommended.
- Provide better training, resources and equipment to enforcement personnel responsible for the control of wildlife protection, hunting and wildlife trade regulations.
- Raise the fines for poaching and illegal harvest of wildlife in the Russian Federation to ensure that they can act as effective deterrent. A fine of the equivalent of up to 50% above the market value of any seized wildlife is recommended.
- Strengthen the role of the judiciary in applying adequate penalties against violations of wildlife and hunting regulations to ensure that sanctions dissuade poachers or smugglers to reiterate their crime.

To promote alternative income generating activities

- Assess the possibility of developing alternative income generating activities with rural communities, including the promotion of the sustainable use of non-timber forest products harvested in the Russian Far East as an additional source of income for rural communities.
- Explore the opportunities of marketing channels for such products, both non-fur and non-timber forest, in the Russian Far East and, where possible, abroad, to increase their commercial value and the income they generate.

Directed to fur trade and marketing companies in the Russian Federation and in the main importing countries

- Actively contribute to setting up and participating in the obligatory marking of furs.
- Participate in and contribute to legal and administrative efforts to improve the marketing or legally harvested fur (e.g. the establishment of centralised auction system) and thereby help to maintain an optimal balance between demand, supply and prices for furs, particularly on the international market (e.g. prevent that hunters are offered minimum prices for their furs; when the demand is stable, avoid the appearance of an exceeding offer of furs, leading to a drop of the retail value).

Directed to NGOs and other relevant institutions and stakeholders in the Russian Federation and in the main importing countries

- Stimulate decision-makers to act upon the above recommendations, including the need for reliable official data on populations and levels of hunting and trade, and for related enforcement measures, and where possible provide the required funds and/or technical expertise to support such activities.
- Pursue the gathering, analysis and promotion of additional information on the potential role of valuable wildlife products in preventing the exploitation of threatened species in the Russian Far East.
- Facilitate the dialogue among decision-makers, including commercial stakeholders, in the Russian Federation and in China to assess the risks and benefits and most appropriate ways to improve the marketing of legally acquired wildlife products, for example through the establishment of a well-controlled auction marketing system.

BACKGROUND

Historical background to the Russian fur trade

In the Russian Federation, hunting and trapping for fur is of high socio-economic importance, particularly in Eastern Siberia and the Russian Far East, as it has also been in former times. Furs, which used to be referred to as *skora* (or "soft gold"), have always played an important role in history of the Russian Federation. Sable *Martes zibellina* fur was mentioned as a commodity for exchange in documents from the fourth century. Furs made a significant contribution to State revenues and comprised approximately 20% of the total State budget around the mid-seventeenth century and more than 10% in 1680 (Pavlov, 1972). In the 19th and 20th centuries, fur trade was very profitable for the State and played an important social role as a primary source of income for people living in Eastern Siberia, the Altai-Sayan region, and the Russian Far East. During the last century, social changes altered the way in which hunting and trapping of fur-bearing animals and the trade in their fur were managed. Nevertheless, hunting for fur remained a high-yielding business for Russians as late as the early 1990s, after which time economic reforms dismantled the centralized management of the fur trade; after this time hunters were no longer provided with equipment, basic daily food products and other necessities at the beginning of each hunting season and furs were no longer centrally purchased from officially authorized hunters. However, the pattern of game management that existed under the "socialist economy," which was based on a vertical management structure and on the State's exclusive monopoly on fur acquisition and trade, collapsed in the early 1990s.

A decrease in demand for furs in the Western markets in the late 1980s and early 1990s caused an abrupt drop in prices for Russian furs, which was only aggravated by the rapid inflation of the Russian rouble during the period 1992–1995. Consequently, thousands of people living in villages in the taiga, dependent on the fur trade to supply their basic income, were adversely affected. With the liberalization of trade which the collapse of the Soviet regime allowed, coupled with a lifting of restrictions on foreign travel, the contention is that hunters in the eastern region of the Russian Federation shifted their activities towards other wildlife products, such as the bones of Amur Tigers *Panthera tigris altaica* and Amur Leopards *Panthera pardus orientalis*, gall bladders of Brown Bears *Ursus arctos* and Asiatic Black Bears *Ursus thibetanus*, antlers of various deer species, such as Red Deer *Cervus elaphus* or Sika Deer *Cervus nippon*, the pods of Siberian Musk Deer *Moschus moschiferus* and Russian Ginseng *Panax ginseng* roots, all of which were in high demand for use in traditional medicine in the newly accessible East Asian markets.

Project background

As part of the current study, and during surveys on wildlife trade in eastern Siberia, the Russian Far East and the Altai region conducted from 1994 to 1996, TRAFFIC Europe-Russia collected data on hunting and trapping for fur and on the rapid growth of illegal harvesting of protected species by professional hunters (Chestin, 1998; Vaisman *et al*., 1999; Vaisman *et al*, 2000). Additionally, the recorded decline of the fur market and subsequent decline in hunting for fur suggested that certain regions of the Russian Federation could soon suffer negative socio-economic and conservation impacts. In turn, it appeared that this could lead hunters to switch from targeting small and abundant fur-bearing species, such as Sable and Red Squirrel, to illegally harvesting rare and protected species, such as Russian Ginseng and Amur Tiger.

The goal of this study was to review socio-economic trends and aspects of hunting and trapping for fur in the Russian Far East, to better understand to what extent recent socio-economic changes might have influenced the increased exploitation of wildlife species of conservation concern. It is hoped that the information compiled will assist relevant bodies in adopting measures that could enhance the potential conservation role of sustainable game management, i.e. management of the legal hunting of abundant mammal species for their fur and of the marketing of furs, according to baseline assessments.

In order to achieve the project's goal, the following basic objectives were established:

- Documentation of the recent decrease in the hunting and trapping for fur and of the decline in the fur trade in the Russian Far East and of the potential effects these trends could have on the exploitation and conservation status of animals traditionally used for fur and on other animal and plant species in the region;
- Improvement of the foundation for decision-making and policy development on wildlife in the Russian Far East, especially for animals traditionally hunted for their fur, achieved by provision of an objective, thorough analysis of readily available information and data on socio-economic factors that influence the choice of animals targeted by trappers and hunters;
- Provision of the international conservation community, national and international decision-makers and the media with new, factual information, analysis and recommendations concerning the trapping and hunting of mammals for their fur, and the raising of their awareness of the impact that socio-economic changes can have on other, often highly threatened, species in the Russian Far East; and
- The increase of local and international understanding of the dynamics of the fur trade in the Russian Far East, as well as understanding of its conservation implications for natural resource management on a broader scale.

The southern part of the Russian Far East (Khabarovskiy and Primorskiy Krays, Amur Oblast, and the Jewish Autonomous Oblast) (see **Figure 1**), which supplied on average 15 to 20% of furs in the Russia Federation (Stakhrovskiy, 1986), was chosen as a sample region. It was selected not only for this reason, but also because nearly half the population of indigenous minorities in the north (the Nanai, Evenk, Ulchi, Nivkh, Even, Udege, Negidal and Orocs) inhabits this region. For many of them, hunting is a necessary component of their traditional economy, lifestyle and culture. Fur hunting and trapping, together with fishing, are considered to be among the most important occupations for the people in the Russian Far East and on average trapping accounts for as much as 60 per cent of their income (Willerslev and Clemmesen, 1996).

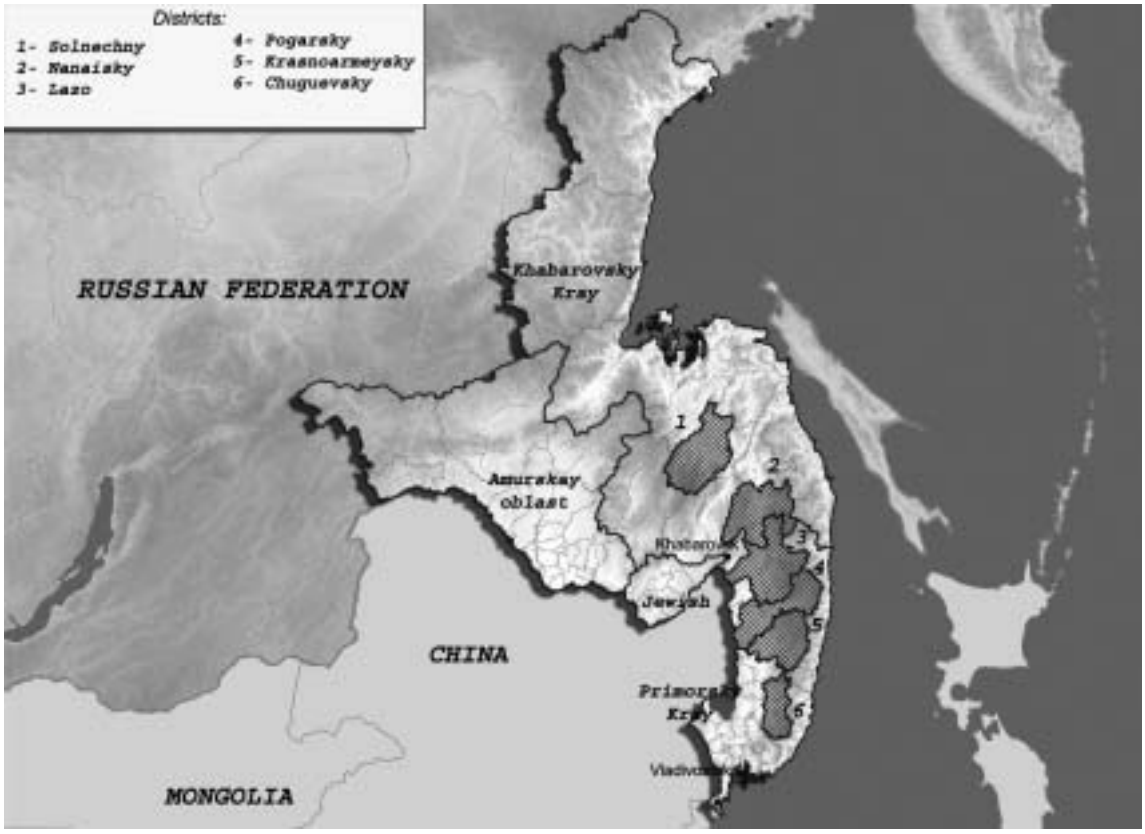

Figure 1. Map of the southern part of the Russian Far East showing the six study areas surveyed in this report. ***Source:*** **I. WWF-Russia / Irina Onufrenya.**

Owing to its geographic proximity to other East Asian countries, such as China, Japan and South Korea, where products and derivatives of many plants and animals are used for traditional medicine, the Russian Far East is one of the regions in the Russian Federation where trade in wildlife is most developed. Vladivostok and Khabarovsk are considered important centres for trade in wildlife (Vaisman *et al*., 1999).

This report is a short version of the original and more comprehensive report in Russian published by TRAFFIC Europe-Russia in March 2005.

METHODOLOGY

Surveys and research for this project were carried out from September 2002 to August 2003. Information was collected during investigations conducted in the southern part of the Russian Far East (Khabarovskiy and Primorskiy Krays, Amur Oblast and the Jewish Autonomous Oblast) (see **Figure 1**) and from relevant published materials. Hunting records and fur trade data were gathered from the same provinces. The apparent emphasis put on the exploitation of and trade in Sable is only a reflection of the species historical economic importance. This robust dataset on Sable fur and its price overtime was used in this study to establish sharper trends of volumes and values, and increase the chances of drawing a clear picture of possible changes in the fur industry.

Sources of information

Data on numbers of animals

The number of animals hunted and trapped for fur (for the period 1981 to 2002) was calculated from data provided by the Centre for Control and Analysis of Information on Hunted Animals and their Habitat (*Tsentrokhotkontrol*), which is under the jurisdiction of the Department for the Protection and Development of Game Resources (henceforth referred to as the Game Department) within the Ministry of Agriculture of the Russian Federation. These data are considered official and are collected from an annual census of mammal species that are active during the winter in Russian forests, according to a standardized method (known as the "winter inventory route") (Anon., 1990). The census assesses population densities of the animals it includes. Population assessments from various experts have also been taken into account.

Data on harvest volumes

Data on the harvest of Sables, Red Squirrels, Eurasian Otters *Lutra lutra*, Siberian Weasels *Mustela sibirica*, Raccoon Dogs *Nyctereutes procyonoides*, Indian Martens *Charronia falvigula,* Mountain Hares *Lepus timidus*, Red Foxes *Vulpes vulpes*, Muskrats *Ondatra zibethicus* and Eurasian Lynxes *Lynx lynx* in the southern part of the Russian Far East from 1981 to 2002 were provided by:

- the State Statistic Committee;
- *Tsentrokhotkontrol*;
- the Far-Eastern Affiliate of the All-Russia Institute of Game Management and Fur Farming;
- the Institute of Economic Studies, the Far-Eastern Branch of the Russian Academy of Sciences; and
- experts and publications.

Data on trade volumes and prices

Data on trade volumes and prices for various furs for the years 1987 to 2000 were obtained from:

- the *Sojuzpushnina* Joint Stock Company (the only auction company in the Russian Federation that is currently involved in fur trade);

- the All-Russia Institute of Game Management and Fur Farming;
- published data;
- internet sources; and
- interviews conducted with experts from *Sojuzpushnina* and with sales personnel from shops in Moscow, Khabarovsk and Vladivostok selling furs.

Data on the illegal trade

Data on seizures of fur skins were obtained from the Far-Eastern Operative Customs Office of the Far-Eastern Customs Department for the period 1991 to 2003. In addition, data for Primorskiy and Khabarovskiy Krays provided by the anti-poaching brigades of the Head Departments of Natural Resources and Environment Protection of the Ministry of Natural Resources of the Russian Federation were used.

Assessing the socio-economic importance

Information on the socio-economic importance for hunters of hunting and trapping for fur was collected through a standardized questionnaire of 30 questions (see **Annex I**). Stratified sampling was used to select six study areas. These included the regions of the Russian Far East where hunting and trapping for fur is most prevalent: the northern districts of Primorskiy Kray (Pozharskiy, Krasnoarmeiskiy and Chuguevskiy) and the southern districts of the Khabarovskiy Kray (Imeni Lazo, Solnechnyi and Nanaiskiy) (see **Figure 1**). In total, 308 hunters from 53 villages of those districts were interviewed - 212 (69%) from Primorskiy Kray and 96 (31%) from Khabarovskiy Kray. Of the 308 hunters, 12% were professional hunters (working on a full-time basis), while the remaining 88% were amateur hunters (working on a seasonal basis). Information was collected in April and May 2003.

Terminology used in this report

The Russian Soviet Federal Socialist Republic (RSFSR) was one of fifteen republics that made up the USSR. After the collapse of the Union in 1991, the RSFSR became a new independent State – the Russian Federation. According to its Constitution, the Russian Federation consists of 89 administrative units of different types. There are 21 republics, 49 *oblasts* (provinces) and six *krays* (territories), in which there are 10 autonomous *okrugs* (autonomous districts) and one autonomous *oblast*. There are two federal cities (Moscow and St Petersburg). Recently, seven extensive federal districts (four in Europe, three in Asia) were added as a new "stratum overlaying" the administrative units described above.

Exchange rates

During the Soviet period, the exchange rate was officially established for official State operations only and was set at one US dollar (USD1) = 0.6 Russian rouble (RUB0.6). There was no foreign currency exchange for private individuals. For the Soviet period, it is more important to compare incomes and systems of prices for goods than to note the official currency exchange rate, which never reflected the real purchasing power of the Russian rouble and thus the dollar equivalent does not provide a reliable picture of the significance of, for example, incomes, values, or of the cost of living in roubles.

After the break-up of the Soviet Union the Russian rouble fluctuated considerable. Between 2000 and 2003, the rouble has ranged between 27-31 RUB to one USD. For the purpose of this report an average exchange rate of one USD = 29 RUB was used for the years 2000-2003.

THE RUSSIAN FUR TRADE PAST AND PRESENT

Legislation and management governing hunting and trapping for fur and trade in furs

The first Russian law on hunting was issued in 1892. It introduced an element of government regulation and control over hunting and the harvest of wild animals and plants. In the period following the Russian Revolution (1917), considerable changes occurred in the regulation of hunting and of the fur trade. The new regime brought all natural resources, including furs, under State ownership and establishment of a State monopoly on furs was one of its first steps. Minimum sale prices for furs were determined in 1919.

Legislation in the Russian Soviet Federal Socialist Republic (RSFSR)

From 1980 to 1991, hunting in the Russian Soviet Federal Socialist Republic (RSFSR) (the territory of the present Russian Federation) was regulated by legislation at Union and Republic level as well as by regulatory documents of the Russian Federation. Basic conditions for the harvest of birds and mammals were established in the all-Union and Russian laws *On Protection and Use of Animals* in 1980 and 1982, respectively.

The *Regulation of Hunting and Game Management in the RSFSR* (No. 1548, adopted by the Statutory Order of the Council of Ministers of the RSFSR on 10 October 1960) regulated game management in Russia. This act introduced the terms "hunting", "game management" and "hunting lands". It stated that hunting was regulated by the executive authorities of the administrative divisions (provinces, republics, etc.) of the RSFSR and by hunting regulations approved by the Head Game Department (*Glavokhota*) of the RSFSR. The regulation also set out the conditions of issuance for hunters' licences and defined illegal hunting. It established that hunting grounds would be assigned to government, co-operative, and public institutions by the executive bodies of the administrative divisions of the RSFSR for periods of 10 years or more. It also ordered the compulsory surrender of all furs to the State and prohibited the processing of furs by private individuals and the purchasing of furs from private individuals. An exception was made for "indigenous peoples of the Far North and other equivalent areas", who were allowed to keep furs for personal use. Otherwise, the dressing and processing of wild animal furs was permitted only by government and co-operative organizations designated for these activities. Harvested furs had to be delivered to the relevant procurement agencies within 30 days of the end of each hunting season.

The Statutory Order *On additional measures to reinforce control over violators of hunting regulations* (Statutory Order No. 87 of the Council of Ministers of the RSFSR, issued on 23 February 1973) approved the list of valuable fur-bearing mammal species, of which the harvested skins were subject to the order for compulsory surrender to the State. The list included Sable, Eurasian Otter, Siberian Weasel, Ermine, Russian Desman *Desmana moschata*, Eurasian Beaver *Castor fiber*, Arctic Fox *Alopex lagopus*, Muskrat, Red Squirrel, martens and minks). The desman was later removed from this list after it was included in the Red Data Book and the Statutory Order *On measures aimed to improve game management in the RSFSR* (Statutory Order No. 433 of the Council of Ministers of the RSFSR, issued on 30 August 1978) added the Red Fox, Lynx and Wolverine to the list.

The *Instructions for harvest, surrender and procurement of skins of licensed fur-bearing animal species on the territory of the RSFSR* (Decree No. 75 of *Glavokhota* of the RSFSR, dated 15 February 1979) detailed procedures for hunting and established harvest quotas.

Standard Hunting Regulations in the RSFSR (approved by a decree of *Glavokhota* of the RSFSR on 1 March 1974) were in force from 1974 to 1988, in accordance with the *Regulation of Hunting and Game Management in the RSFSR*. They established the following: the right to hunt; prohibited means and methods of hunting; terms for hunting; hunting products; hunting controls; the apportioning of responsibility for viola-

tions and a scale of charges levied from organizations or private individuals in compensation for damages inflicted upon the State game fund. In 1988, the *Standard Hunting Regulations in the RSFSR* were revised (by Decree No. 1 of *Glavokhota* of the RSFSR on 4 January 1988). Instructions for preparing hunting regulations in administrative subdivisions of the RSFSR were also issued (Letter N 6-17 of *Glavokhota* of the RSFSR on 25 January 1988) and hunting regulations were adopted in each of these subdivisions.

Legislation in the Russian Federation

The federal law *On fauna* No. 52-*FZ* of 24 April 1995 defines the proprietary rights of users, including hunters, over harvested animals and their products (Article 40). This, combined with the provisions of the *Civil Code of the Russian Federation* (Articles 1, 136, 209 and 218), entitles the owner to dispose of the property at his/her will. The hunter may use a legally harvested product for his own purposes - exhibit, sell, change, pawn, process it, etc. He may sell it to either domestic or foreign customers. The legislation which provided for the compulsory surrender of furs to the State and banned the processing of valuable and other fur-bearing animal skins and their sale has never officially been repealed, but it should no longer be applied as it contradicts subsequent legislation and the constitution of the Russian Federation.

Minimum prices for hunting licences were first established by a decree in 1999, replaced in January 2000 by Decree No. 1 of the Government of the Russian Federation, *On price limits for the use of licensed game animals*. Hunting licence prices are determined for every species or group of species by the executive bodies of the administrative divisions of the Russian Federation, based on the minimum prices shown in **Table 1**. Payments for the use of these species enters the State budget as taxes (Kraev, 2000). Animals in the wild are State property but wild animals, including game animals, become the property of a hunter or trapper from the moment he removes them (legally) from the wild, according to civil law.

In short then, the State monopoly on trade in furs was dissolved with the new constitution (1993), the *Civil Code* (1994), the Federal Law of the Russian Federation *On fauna* (1995) and other legislative acts which entered into force. No changes were made to the procedures that assigned "game lands" and they continued to be assigned to government, co-operative and public organizations.

Table 1.

Minimum prices for hunting licences for fur-bearing species.

Species	Minimum price for one animal	
	in RUB	in USD
Eurasian Lynx *Lynx lynx*	450	15.5
Wolverine *Gulo gulo*	450	15.5
Eurasian Otter *Lutra lutra*	120	4.1
Sable *Martes zibellina*	120	4.1
Indian Marten *Charronia flavigula*	100	3.5
Wild cats *Felis* spp.	100	3.5
Eurasian Beaver *Castor fiber*	60	2.1
Eurasian Badger *Meles meles*	60	2.1
Martens *Martes* spp.	60	2.1
Marmots *Marmota* spp.	60	2.1
Common Raccoon *Procyon lotor*	30	1.0
European Mink *Mustela lutreola*	30	1.0

Source: Tax Code of the Russian Federation

Administrative roles and responsibilities in the RSFSR – prior to 1991

The Head Game Department (*Glavokhota*) of the RSFSR was responsible for game management from 1955. It controlled "appropriate game management and implementation of legislation regarding the preservation and enrichment of useful flora and fauna and the management of reserves" and "together with the Ministry of the Interior of the USSR" took "measures against poaching and violations of hunting regulations". Regional branches of *Glavokhota* were established in 1955 in the form of *oblast* or *kray* game inspectorates; in 1962, several of these became Departments of Game Industry. They were responsible for the implementation of activities to protect wild fauna, conduct population censuses, restore game stock, survey and arrange hunting grounds, establish harvest quotas for game mammals and birds, develop proposals to plan the purchase of game products and manage State-owned game enterprises. Regional "game control services" were established in 1963 and, during the 1980s, economic zones were established under the supervision of these regional bodies for the organization of commercial harvest of furs, meat and other wild animals products. In 1988, the game inspectorates were transformed into Departments of Game Management and economic game industry associations were established in 12 administrative divisions of the Russian Federation. In 1990, *Glavokhota* became a subdivision of the newly established Ministry of Agriculture and Food of the RSFSR.

Hunting administration in the Russian Federation – after 1991

In 1993, the Department of Game Management was abolished, and the Department for Protection and Sustainable Use of Game Resources (Game Department) was established within the Ministry of Agriculture of the Russian Federation. This department was the official State body responsible for regulating the use of hunting species until, in 2000, it was renamed the Department for Protection and Development of Game Resources. Until March 2004, this department and its regional bodies were responsible for regulating the use of game species (Kraev and Kraeva, 2003).

Following presidential decrees in March and May 2004, the structure of the Federal Government completely changed and currently the management of hunting falls under the jurisdiction of the following three agencies: the Ministry of Agriculture (for general policy and legislation), the Federal Agency of Agriculture (responsible for population censuses, quotas, licences, hunting permits, etc.) and the Federal Service on Phytosanitary and Veterinary Control (control of hunting). Both the Federal Agency and the Federal Service report to the Ministry of Agriculture. The *Tzentrokhotkontrol*, under supervision of the Department for Protection and Development of Game Resources, supervises species population censuses and analysis and publication the results. This organ was established in 2000 on the basis of the Central Research Laboratory of *Glavokhota* of the RSFSR. Regional bodies of the Game Department in the administrative divisions of the Russian Federation prepare information for the allocation of harvest quotas for game animals in each region. This information is submitted to the regional bodies of the Ministry of Natural Resources of the Russian Federation for environmental assessment and for further approval by the Game Department. Following the restructuring of the Federal Government in 2004, documents for ecological review are supposed to be submitted to the regional branches of the Federal Service for Control of Environmental Management. Quota allocations take into account the population status of species.

Harvest quotas for fur-bearing 'game species'

Being State property, "game animals" are divided into two categories: species considered "resources of federal importance", for which licences are issued at the federal level, and species considered "resources of regional importance", for which licences are issued at regional level. Among species hunted for their fur, Sable, Eurasian Beaver, and Eurasian Otter are considered to be species of federal importance. All other species are considered to be of regional importance.

The Game Department establishes annual hunting quotas for each regional administration (*kray, oblast*, etc.) of the Russian Federation. These quotas are based on recommendations from *Tzentrokhotkontrol*,

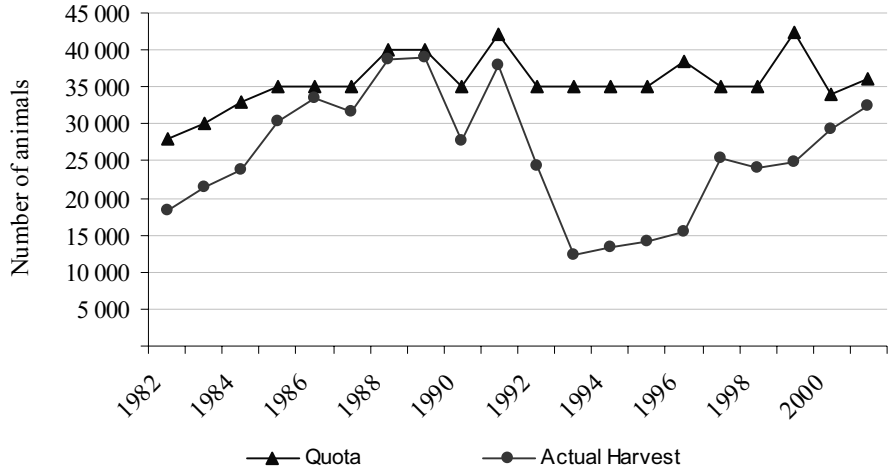

Figure 2. Hunting quota and reported harvest levels of Sable in Khabarovskiy Kray, 1982-2001.
***Source*: The Far-Eastern Affiliate of the All-Russia Institute of Game Management and Fur Farming.**

applications for quotas from the regions, and on the Department's own intelligence and analysis of the status of species populations. Quotas for the harvest of "animal species considered to be resources of regional importance" are determined by the regional Departments of Game Management and are approved by the regional administrations, based on population data for the species.

As an example, the harvest quotas and harvest levels for Sable in Khabarovskiy Kray, 1982-2001, are shown in **Figure 2**. However, it should be noted that many harvested skins are not recorded in the official statistics and subsequently the harvest data shown are almost certainly underestimated (Darenskiy and Shvetz, 2001; Sukhomirov, 2000).

Hunting rights

In the RSFSR, the right to hunt commercially was granted by the *Provision for Hunting and Game Management in the RSFSR*. Hunters who had signed contracts with procurement agencies, commercial game enterprises or collective farms, were required to pay a State tax and were then provided with a licence to hunt, regardless of their membership of hunters' associations. The list of areas allocated for commercial hunting was defined by *Glavokhota*. The *Provision for Hunting and Game Management* ensured the rights of indigenous peoples belonging to tribal minorities in the North and Far East to hunt, at any age, with various kinds of traps and with firearms from the age of 14. A personal hunter's certificate, which denoted that the hunter had passed relevant tests and paid the State tax, was a document that ensured the right to hunt commercially. In 1993, the *Provision for Hunting and Game Management* was amended to omit the term "area of commercial hunting". It abolished the right to hunt commercially and the special right of indigenous peoples (northern minorities) to hunt.

Since 1996, when the Federal law *On weapons* came into effect, the legal age for buying and using hunting firearms has been 18. The law provides for the possibility of lowering this age limit to 17 or 16 years of age at the discretion of regional administrations in the Russian Federation but, according to the results of investigations made during the course of this study, this dispensation has not been used anywhere in the Russian Federation and so currently no person younger than 18 is allowed to hunt commercially.

In 1999, the use of hunting permits was abolished and the purchase of a personal, one-time licence for the right to use "animal objects" (i.e. the animal and its products removed from the wild State) has become an obligatory condition of commercial and sport hunting. A licence authorizes the harvest of animals within a defined area (formerly "hunting grounds"). Licences are issued by district agencies of Game Control or by long-term holders of hunting licences, up to the limits allocated to them. A person who has legally harvested a game animal acquires the property rights over it, regardless of the organization issuing the licence.

International regulations related to the use of humane trapping standards

In November 1991, the Council of Ministers of the European Community (EC) adopted *Regulation (EC) No 3254/91* "prohibiting the use of leghold traps in the Community and the introduction into the Community of pelts and manufactured goods of certain wild animal species originating in countries which catch them by means of leghold traps or trapping methods which do not meet international humane trapping standards". Thirteen animal species, Sable among them, are listed in the Annex to this regulation. According to the Regulation, all countries failing to abide by its terms have been forbidden from exporting their products to the European Union (EU) since 1 January 1995. However, the EU perceived that the use of import bans could be incompatible with international trade rules of the World Trade Organization (WTO) and started negotiations with Canada, the Russian Federation and the USA to agree "humane trapping standards". Consequently, the EU has entered into two international agreements with the aim of establishing international standards in this area. The first of these, the *Agreement on International Humane Trapping Standards* (AIHTS) was signed by the EC and Canada in 1997 and by the Russian Federation in 1998 and approved by the EU Member States through *Council Decision 98/142/EC*. However, since 1997 the AIHTS has been applied provisionally only, pending its entry into force, which requires ratification by the Russian Federation. The second agreement is a bilateral agreement between the EU and the USA and is substantially similar but is in the form of an agreed minute, and was approved in the EU by *Council Decision 98/487/EC*.

The objectives of the AIHTS are to establish standards on humane trapping methods, to improve communication and co-operation between Parties for the implementation and development of the standards, and to facilitate trade in furs and traps between Parties. According to the AIHTS, Parties are obliged to prohibit, within an agreed timetable, the use of all restraining and killing traps which do not meet the humane trapping standards for the 19 specified animal species (see **Annex 2**). The Russian Federation has not yet ratified the AIHTS, but at the time the present report was under preparation the documents were being considered by the relevant Russian Ministry. Obstacles to ratification are mostly related to the potential socio-economic consequences of prohibiting certain trapping methods without providing appropriate alternatives, especially for the indigenous communities in the north of the Russian Federation and in the Russian Far East. The *Declaration by the European Community*, contained in the AIHTS states that the EU "will not take any measure implementing *Council Regulation (EEC) No 3254/91* during the time reasonably needed for the other Parties to ratify the Agreement and, after ratification, no such measure will be taken so long as the Agreement remains in force and is applied according to its provisions."

Following the adoption of *EC Regulation No 3254/91*, the Russian Federation added the following point to Article 40 of the federal law *On fauna*, on 24 April 1995: "the use of leghold traps is prohibited, except in cases provided for by laws and other legislative acts of administrative divisions of the Russian Federation". Despite the fact that no alternative traps are produced in the Russian Federation, about 25% of the Russian regional administrations have already banned the use of leghold traps in their territories (Kuznetsov, 1998). However, these measures are applied with flexibility, in particular in the regions where hunting plays a role in the livelihoods of communities. Nothing has changed in the southern part of the Russian Far East, where fur-bearing animals are still caught with leghold traps.

In 1997, the EU banned imports of fur obtained through the use of leghold traps from countries not part of the AIHTS. As the Russian Federation and Canada signed the AIHTS, the ban does not apply to them and these countries can still export furs to the EU as a result of their commitment to implement the AIHTS.

In July 2004, the European Commission submitted to the European Parliament and to the Council a proposal for a *Directive of the European Parliament and of the Council introducing humane trapping standards for certain animal species* that aims to implement the commitments and obligations of the AIHTS in the 25 EU Member States and would relate among others to: the use of humane trapping standards; requirements for specified trapping methods; technical provisions for testing trapping methods; and certification of traps for capturing certain species of mammals. In addition, it is proposed that, after 1 January 2009, only certified

traps may be used to trap the 19 specified species (**Annex 2**), and that, as of 1 January 2012, traps not in compliance with humane trapping standards may no longer be used, whatever the species. At the time the present report was under preparation, the proposed Directive still needed to be adopted jointly by the European Parliament and the Council.

Population status and trends of "game species" in the Russian Far East

A number of fur-bearing mammal species that occur in the Russian Far East are classified as "game species" (which means that hunting is permitted if in accordance with the legal requirements described in the previous chapter). The most important species commonly hunted for their fur are listed below with information

Table 2.

Overview of the population status and trends of selected species, for the Russian Federation (RF) and the Russian Far East (RFE).

Species	Recent population estimate for RF	Recent population estimate for RFE	Trends in RFE*
Sable	1.2 million	220 000	Stable with positive tendency
Red Squirrel	13.8 million	1.6 million	Decreased
Siberian Weasel	514 500	64 000	Decreased
Muskrat	1.56-1.79 million	137 000	Unclear
Raccoon Dog	110-130 000	18 000	Stable
Red Fox	517 000	25 000	Stable
Mountain Hare	4.3 million	316 000	Stable
Eurasian Lynx	30 000	3700	Stable
Ermine	1 million	30 000	Decreased
Wolverine	25 700	1500	Unclear
Wolf	44 300	2700	Stable

Source: References for population estimates in the text; * based on interviews with 308 hunters.

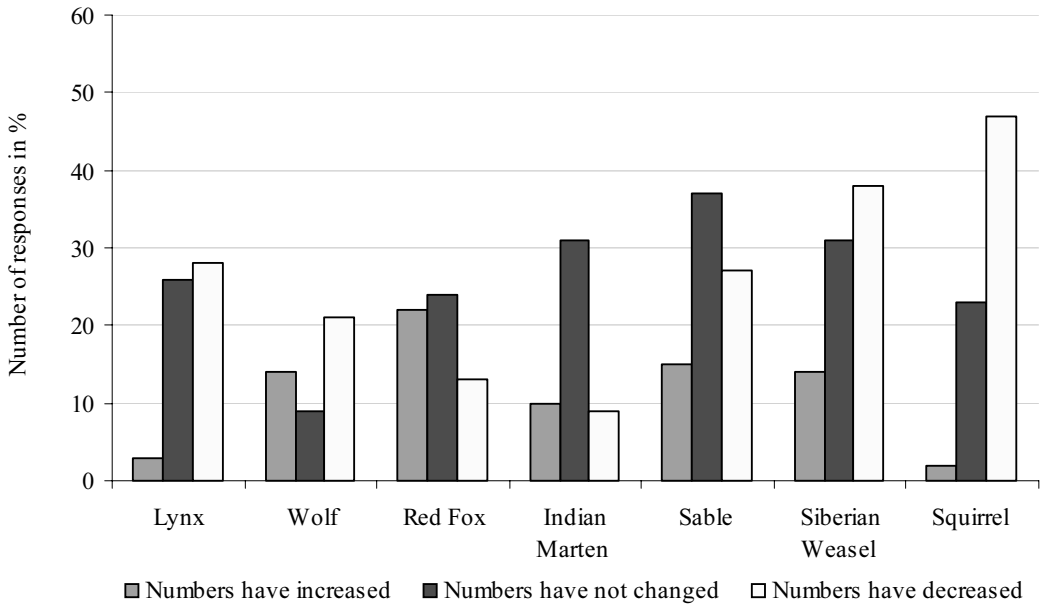

Figure 3. Population trends of selected species hunted for fur in the southern part of the Russian Far East based on hunters' responses. *Source:* TRAFFIC Europe–Russia interviews with hunters.

on their population status and the level of management and protection. **Figure 3** and **Table 2** provide an overview of population status and trends of selected species that are hunted or trapped for fur in the Russian Far East.

Sable *Martes zibellina* (© WWF-Russia / Vasiliy Solkin).

Sable *Martes zibellina*

Population: In the early 2000s, leading Sable experts (Bakeev and Sinitzyn, 1998; Darenskiy and Shvetz, 2001; Sedalischev and Popov, 2001; Sukhomirov, 2000) and official statistics (Borisov *et al.*, 1992; Lomanov, 1996 and 2000) acknowledged a positive trend for Sable populations in the Russian Federation. They are believed to exceed the official estimate of 1.2 million individuals and continue to increase (Sinitzyn, 2003). It is estimated that, in the future, the national Sable population could increase up to 1.5 to 1.8 million animals, even with a legal annual harvest of 350 000 to 500 000 animals (Sinitzyn, 2003). Some researchers have noted a decline in Sable population densities and the disappearance of Sables from areas close to human settlements (Sokolov, 1998 and 2002; Zyrianov and Sokolov, 2002). Fluctuations in the Russian Sable population, 1982 to 2002, according to official State data, are shown in **Table 3**. At the beginning of the 21st century, experts estimated the Sable population of the Russian Far East to be 220 000 individuals (Glushkov *et al*., 2003).

According to 27% of the 308 hunters interviewed for this study, there has been a general decrease in the number of Sables in Khabarovskiy Kray over the last ten years (see **Figure 3**). This observation might reflect the increased costs of transportation to reach traditionally used remote hunting grounds, meaning that easily accessible lands (including those near settlements) are exposed to higher hunting pressure bringing about a related decline in Sable numbers. Around 37% of the 308 hunters considered the Sable population to be stable.

Table 3.

Russian Sable population, 1982-2002.

Year	Number of individuals	Year	Number of individuals
1982	599 900	1993	954 300
1983	581 100	1994	1 020 000
1984	601 600	1995	858 400
1985	660 500	1996	990 700
1986	612 000	1997	1 007 600
1987	642 000	1998	1 057 200
1988	650 000	1999	1 077 400
1989	698 500	2000	1 196 500
1990	710 800	2001	1 122 400
1991	995 300	2002	1 071 300
1992	1 016 500		

Source: Tzentrokhotkontrol.

Red Squirrel *Sciurus vulgaris*

Population: The total number of Red Squirrels was estimated at 13.8 million in 2001 (Glushkov *et al*., 2003). The squirrel population of the Russian Far East seems to have fluctuated significantly over the years. A high number of Red Squirrels was recorded in the 1930s, when Sable numbers were at low levels (Sukhomirov, pers. comm., 2003). In 2003, the number of squirrels in the Russian Far East was estimated at 1.6 million (Glushkov *et al*., 2003). According to interviews conducted for this study, more than 47% of the hunters had noticed a decline in the number of Red Squirrels over the last 10 years (see **Figure 3**).

Siberian Weasel *Mustela sibirica*

Population: In 1990, Siberian Weasels were relatively scarce in the Russia Federation and the estimated population reached 486 700 individuals for the whole of the Russian Federation. The 514 500 Siberian Weasels estimated for 1995 (see **Table 2**) appear to have represented a peak in numbers as, according to official data, the population had declined by approximately 30% in 1999, as compared to the average for the 1990s (Lomanov, 2000).

The population of Siberian Weasels in the Russian Far East was estimated to have peaked in the 1920–1930s. Until the 1960s, the Russian Far East Siberian Weasel population was relatively healthy, but decreased in the following decades. In the early 2000s, Siberian Weasels numbered around 64 000 (Lomanov, 2000).

Muskrat *Ondatra zibethica*

Population: This species was introduced to the Russian Federation in the 1920s. Population estimates are based on an assessment of the species' abundance, on data from fragmented censuses in various habitat types, and on reported volumes of harvest and supply. These estimates should be regarded cautiously because no regular censuses of the species have been conducted. From 1996 to 2000, the estimated population of Muskrats in the Russian Federation fluctuated between 1.56 and 1.79 million animals (Glushkov *et al.,* 2003). The number of individuals in the Russian Far East at the beginning of 2000s was estimated to be 137 000 (Glushkov et al., 2003).

Raccoon Dog *Nyctereutes procyonoides*

Population : According to experts, the Raccoon Dog population in the Russian Federation ranges from 110 000 to 130 000 individuals (Borisov *et al.*, 1992). For the Russian Far East, the population was considered relatively stable and estimated at about 18 000 in the early 2000s (Sukhomirov, pers. comm., 2003).

Red Fox *Vulpes vulpes*

Population: In the 1990s, the number of foxes in the Russian Federation exceeded estimates made in the 1980s. Fox numbers peaked in 1999, when they reached 517 600 (Lomanov, 2000). In the Russian Far East, the current population is estimated at 25 000 individuals (Glushkov *et al*., 2003).

Eurasian Otter *Lutra lutra*

Conservation status: This species is included in CITES Appendix I and in Annex A of the EU *Wildlife Trade Regulations* (*Council Regulation (EC) No 338/97* and related Commission Regulation).

Population: The Russian population is estimated at 55 000 to 65 000 individuals (Lomanov, 2000). In 2000, the population in the Russian Far East did not exceed 6800 individuals (Lomanov, 2000).

Mountain Hare *Lepus timidus*

Population: The estimated population of Mountain Hares for the Russian Federation between 1995 and 1997 was 4.8-4.9 million. It fell to 4.3 million in 1998, but an increase was recorded in 1999 (Lomanov, 2000). In the Russian Far East, the estimated number of Mountain Hares in 1999 was 316 000 individuals (Glushkov *et al*., 2003).

Eurasian Lynx *Lynx lynx*

Conservation status: The Eurasian Lynx is listed in CITES Appendix II and in Annex A of the EU *Wildlife Trade Regulations* (*Council Regulation (EC) No 338/97* and related Commission Regulation).

Population: In the 1990s, it appears that the Eurasian Lynx population decreased in the Russian Federation. Until 1995, it is estimated that there were up to 35 000 individuals; then a decline was recorded and estimates of the number of Eurasian Lynxes have not exceeded 30 000 individuals since 1996. In 1999, a possible increase in numbers was recorded (Lomanov, 2000). In the Russian Far East, numbers are relatively stable and are estimated at 3700 (Glushkov *et al*., 2003).

Ermine *Mustela erminea*

Population: The highest recorded number of Ermines in the Russian Federation was 2.1 million individuals, in the 1990s. In 2000, their numbers were put at one million animals (Lomanov, 2000). In the Russian Far East, the total number of animals is reported to have decreased slightly since the 1980s. Some experts believe that one of the reasons for this apparent decline could be the negative impact of competition from Sables for habitat and food. The Ermine population was estimated recently to be 30 000 (Lomanov, 2000).

Wolverine *Gulo gulo*

Conservation status: The species is listed in the *2004 IUCN Red List* as Vulnerable (Anon., 2004).

Population: The total number of Wolverines in the Russian Federation was estimated at 25 700 in 1999 (Lomanov, 2000). The population in the Russian Far East reached 1500 in 1999 (Lomanov, 2000).

Wolf *Canis lupus*

Conservation status: The species is listed in Appendix II of CITES and Annex A of the EU *Wildlife Trade Regulations* (*Council Regulation (EC) No 338/97* and related Commission Regulation).

Population: The total Russian population was estimated at 44 300 in 1999 (Lomanov, 2000). The population in the Russian Far East was estimated at 2700 in 2001 (Glushkov *et al*., 2003).

Commercial use of fur-bearing animals in the Russian Far East

Organization of fur harvest and trade

Accessibility of hunting grounds

Up to the end of the 19th century, organized hunting teams traditionally hunted and trapped for fur in Siberia and the Russian Far East. The members of such teams were usually related and/or lived in the same village. The teams hunted in the same places every year, places assigned to them by tradition, rather than on any legal basis.

Hunting grounds can be divided into “remote” and “easily accessible” hunting grounds. (The meaning of the term “remote hunting grounds” may differ considerably from region to region. It depends, among other things, on the profitability of fur hunting in a particular area, as well as on the development of the road network and the availability of water routes.) During the Soviet period, when fur harvest was State-organized, all hunting grounds were more or less equally used, including very remote areas accessible by helicopter only. By the early 2000s, most commercial furs were harvested from areas that are relatively easily accessible, as the low profits from hunting and trapping for fur do not allow hunters to use aircraft to hunt in areas that are located further than 150 km away from their settlements. Hunters seldom travel more than two to three days over land or water; this is because the costs incurred by travelling greater distances cannot be recovered from the sale of harvested products. As a result, areas that are difficult to access are not used

by hunters and could be playing an important role as breeding grounds for species heavily exploited in more developed areas.

The interviews with hunters conducted for this study revealed that cars and motorbikes are the hunters' most popular means of transport. Only 25% of the hunters in the Primorskiy Kray and 4% in Khabarovskiy Kray access hunting grounds on foot or on skis. The difference between the two regions results from the fact that in the Primorskiy Kray rural dwellings are more evenly distributed over the territory, and thereby are usually closer to hunting areas.

The official season for hunting and trapping for fur is from September/October to February/March (depending on the region). In the Russian Far East, the season averages two-and-a-half months, from mid-November till late January. Of those hunters interviewed for this study, virtually all for whom hunting was their main source of income spent the whole hunting season in the taiga. A different schedule appears to be more convenient for the "amateur" or "seasonal" hunter, for whom commercial hunting and trapping for fur is not the main source of income. They go hunting from time to time during the official hunting season and only one-third of them spends the whole season in the taiga. The period of time hunters spent in the taiga is determined by the distance to the hunting area from home. If the area is relatively close to their place of residence, the hunters prefer to spend fewer consecutive days away and instead visit the taiga from time to time, as that way they need take smaller amounts of food and equipment, it being possible to spend two to three days in the taiga without shelter.

Selling and marketing of furs

Khabarovskiy Kray provides a good example to illustrate the commercial structures involved in the hunting and trapping for fur in the Russian Far East. It is the largest region in the Russian Far East and supplies the largest amount of furs.

Until 1991, 16 large co-operatives and State hunting enterprises existed in Khabarovskiy Kray. They supplied hunters with free ammunition, equipment and transport, including aircrafts. Professional hunters were employed by these hunting enterprises and were obliged to sell all harvested furs at fixed prices. All furs supplied by State hunting enterprises or by procurement agencies were sold on international and domestic markets by State trading companies, including auction companies. The economic crisis of the Russian Federation in the early 1990s resulted in the disintegration of such State management of hunting and furs. The State monopoly on fur harvest and trade ceased to exist when the Soviet era ended. More than 180 game and fur companies, of varying legal status, appeared in Khabarovskiy Kray and the system of purchasing and marketing commercial furs changed accordingly.

Today, the system for buying furs in Khabarovskiy Kray can be described as follows:

- Hunters who hunt on hunting grounds assigned to land-holders must hold a valid hunting licence, sign a contract with the land-holder, to whom they must also sell the harvested furs at fixed prices. This system is unprofitable for hunters and leads them to harvest in excess of the licensed limits so that they have excess furs to sell, at higher prices, on the open market; and
- Hunters who do not hunt on grounds assigned to land-holders buy single-use personal hunting licences (see *Hunting rights*) and sell furs to trade agents who pay higher prices for their products.

Individual private procurement agents visit the hunters' villages in November and December and buy furs from them in exchange for money or goods, for example flour, sugar, vodka, fuel, oil, etc. The furs are then sold on at higher prices to companies that sell furs at auction, or direct to Chinese traders. Some hunters will try to sell their furs directly to companies in an attempt to achieve a higher profit. Large companies have their own network of trade agents, not only in remote areas, but also in neighbouring *oblasts* and *krays*. Companies that regularly participate in auctions take furs from hunters and from small trade agencies for a commission equivalent to 9-15% of the sale price.

Table 4.

Number of skins officially harvested in the USSR for selected species, 1982-1988.

Species	1982	1983	1984	1985	1986	1987	1988
Red Squirrel	2 934 600	2 981 600	4 206 000	4 335 900	3 221 700	3 014 100	3 996 200
Sable	148 500	163 500	189 900	232 200	241 200	252 000	253 600
Eurasian Lynx	600	2100	4 500	5400	5500	4300	4600
Eurasian Otter	800	1300	1700	2100	2500	2700	2500
Ermine	102 000	102 900	111 400	127 000	111 400	106 000	119 700
Muskrat	847 000	1 089 400	1 325 700	1 260 400	1 338 700	1 508 400	1 258 900

Source: Poletzkiy, 1990.

Most of the hunters from Khabarovskiy Kray interviewed for this study sold furs to Russian trade companies (34%) and to Russian marketing agents (35%). A further 26% per cent sold their furs to occasional buyers who appeared often to be intermediaries, selling furs on to Chinese businessmen. A small number of furs (5%) were reportedly bought direct by non-Russians.

Trends in the harvest of furs in the southern part of the Russian Far East

Official harvest of fur-bearing animals in the Russian Federation

Trends in the commercial harvest of furs are illustrated by trends in the harvest of Sable and Red Squirrel furs, because these two animals have constituted the basis of the Russian fur trade since the 1960s. In 1987, the official Sable harvest (i.e. that corresponding to annual hunting quotas) reached 250 000 individuals (see **Table 4**) (Poletzkiy, 1990). The actual harvest of fur-bearing animals, however, significantly exceeded these figures (see next section).

Harvest and sale of fur in the southern parts of the Russian Far East

Figures 4 and **5** show trends in harvest volumes of the most important fur-bearers between 1980 and 2001 in the southern parts of the Russian Far East (Khabarovskiy and Primorskiy Krays, Amur Oblast, and the Jewish Autonomous Oblast). They are based on official data recorded and published by the State Statistic Committee *Tsentrokhotkontrol*. It should be noted that many harvested skins are not recorded in the official statistics (Darenskiy and Shvetz, 2001; Sukhomirov, 2000) and therefore it is likely that these data signifi-

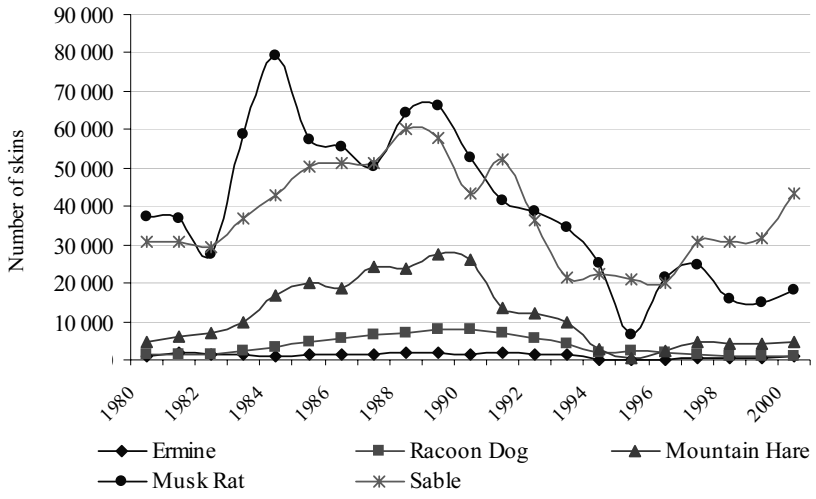

Figure 4. Harvest of selected species in the southern part of the Russian Far East between 1980 and 2001.
Source: The Far-Eastern Affiliate of the All-Russia Institute of Game Management and Fur Farming.

Table 5.

Trends in the harvest of different mammal species in the Russian Far East between 1986 and 1995.

Species	Annual average 1986-90	1991	1992	1993	1994	1995	Annual average 1991-95	% '91-'95 of '86-'90
Red Squirrel	587 700	391 800	187 100	267 900	248 600	102 600	239 600	41
Muskrat	556 900	289 200	132 400	162 300	122 400	44 600	150 200	27
Mountain Hare	190 500	226 200	91 400	326 600	50 500	7000	140 300	74
Sable	126 000	98 100	64 000	48 700	50 900	29 600	58 300	46
Siberian Weasel	67 900	56 500	40 600	30 000	26 600	26 300	36 000	53
Ermine	63 600	35 200	26 500	34 800	19 300	5800	24 300	38
American Mink	18 300	8800	7600	8600	5700	2300	6600	36
Raccoon Dog	7300	7300	6000	4000	1900	1500	4100	57
Red Fox	5700	2400	2900	1600	000	900	1800	31
Arctic Fox	15 600	550	900	1000	1200	700	1800	12
Eurasian Otter	9707	650	450	410	240	130	380	39
Wolf	960	510	210	170	160	460	300	31
Eurasian Lynx	510	350	250	110	90	100	180	35

Source: Sukhomirov, 1998

cantly underestimate the levels of actual harvest. For example, Sukhomirov (1998) estimates that over 20% of animals actually harvested between 1986 and 1990 were not recorded in official statistics.

The figures show that harvest levels of virtually all furs in the region have increased in the early 1980s. The largest volume of furs was supplied by Khabarovskiy Kray in 1988, Primorskiy Kray in 1987 and Amur Oblast in 1985. In subsequent years, fur supplies remained relatively high until 1991. After 1992, the amount of furs harvested abruptly dropped. For most species, the lowest harvest levels were recorded in 1996, but after that harvest levels started to increase slightly and, in 2001, the volume of Sable skins harvested almost reached its level of the late 1980s (see **Figure 4**).

Harvest data for the whole Russian Far East, 1986-1995, for various mammal species (**Table 5**), reveal that harvest levels have decreased significantly for some species. For example, the harvest of Mountain Hare skins decreased from an average of 190 500 per year (1986-1990), to an average of 140 300 (1991-1995). The average annual harvest of Sable skins, 1991-1995, fell to less than half its volume for the period 1986-1990 and similar trends can be seen for the other species (see **Table 5**). Harvest data are reported per hunting season (from September/October to February/March depending on the region).

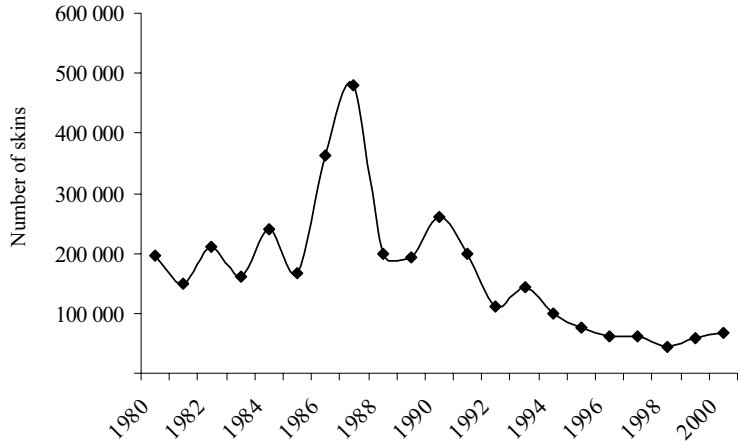

Figure 5. Harvest of squirrel skins in the southern part of the Russian Far East between 1980 and 2001.
Source: **The Far-Eastern Affiliate of the All-Russia Institute of Game Management and Fur Farming.**

Table 6.

Rank of most important species of fur-bearing mammals in terms of the value of their fur, 1991-1996 (ranked as a percentage (%) and based on prices paid to hunters).

Species	1991	1992	1993	1994	1995	1996	Average
Sable	49	55	54	61	55	59	55
Red Squirrel	17	18	10	10	22	19	16
Muskrat	7	9	18	12	11	11	11
American Mink (wild)	3	3	3	3	2	2	3
Eurasian Beaver	3	2	2	2	2	1	2
Siberian Weasel	3	1	1	1	1	1	2
Martens	2	2	2	2	2	2	2
Red Fox	1	2	2	2	2	2	2
Mole	3	1	<1	<1	<1	<1	1
Mountain Hare	3	1	1	<1	<1	<1	1
Raccoon Dog	2	1	1	<1	<1	<1	1
Arctic Fox	1	2	2	2	<1	<1	1
Ermine and European Hare	2	<1	<1	<1	<1	<1	<1
Wolf, Eurasian Otter, Eurasian Lynx and Eurasian Badger	<1	<1	<1	<1	<1	<1	<1

Source: Andreev and Telepnev, 1998.

It should be noted that official governmental statistics on fur harvest were mandatory only until the mid-1990s. The last official statistical reports on fur harvest were prepared in 1996 and, since then, only internal reports (provided by the regional Game Departments) have been available. These reports are less precise, usually give an underestimate of the actual harvest, and do not include skins that have been harvested illegally.

It is estimated that the illegal portion of the Sable harvest in Krasnoyarskiy Kray is, on average, 30%, reaching 57% in some districts. In regions of eastern Siberia and in other regions of the Russian Far East, it is estimated that the total Sable harvest exceeded the official harvest, on average, by around 26%, ranging between 16 and 46% depending on the district (Lineitzeva, 1985). Seasonal amateur hunters sell less than half of the Sables they caught throughout the region to official marketing agents. The same situation was true for many hunting enterprises in Primorskiy Kray. In the 1980s, up to 40% of the harvested Sable was not officially registered. The actual number of Sables hunted by amateur hunters was estimated to have exceeded the annual hunting quota by 160% and the number hunted by professional hunters was estimated to have exceeded the quota by 50% (P. Fomenko, pers. comm., 2003). Most commercial hunting enterprises preferred to hire professional hunters, these professional hunters harvested 60 to 80% of all Sable skins produced. Thus, it is estimated that the real Sable harvest exceeded official records by at least by 30% and that more than 300 000 Sables were harvested annually in the mid-1980s.

Trends in volumes of fur traded

Domestic trade

In the mid-1990s, the market share for Sable skins increased (from 49% in 1991 to 59% in 1996). This might be explained by the increasing demand for Sable skins on the international market, in comparison with the decreasing demand for furs from other species such as Beaver, Mountain Hare, Siberian Weasel and Raccoon Dog.

According to calculations made by the *Fur Breeders' Union,* a non-profit organization, the Russian domestic fur market in the early 2000s accounted for 9.5 million skins of various animals, including some bred in captivity (Anon., 2002). The domestic market is supplied by skins of animals that are in low demand at international fur auctions. Among them are Muskrat, wild American Mink, Red Fox, Eurasian Lynx, Raccoon Dog, Mountain Hare and Eurasian Otter. Surveys undertaken by TRAFFIC on the fur market in Vladivostok between 2002 and 2003 revealed that approximately 20% of the products offered had been manufactured from Russian furs by local fur manufacturers and individual producers (the remainder had been imported). These domestically produced goods were of skins of wild and farm-raised mink (60% of the products), Raccoon Dog (20%), Eurasian Badger (10%) and Arctic Fox (10%); only a few hats were made of Sable fur. Local furs are used primarily for manufacturing hats and caps. Fur quality standards on the domestic market are lower than those at international auctions.

International trade (auction trade)

In the world fur business, more than 95% of raw and processed furs are marketed at auction, which is considered the most progressive type of trade (Anon., 2002). Until the mid-1980s, the USSR was recognized as the world's largest supplier of high quality furs. The first auction of Russian furs was held in Leipzig, in September 1921. The All-Union Fur Syndicate of the USSR was founded in 1930 under the supervision of the Public Commissariat of Foreign Trade, for the further development of the fur business. In 1931, it became the *Sojuzpushnina* All-Union Association. The association traditionally exported Sable, Red Squirrel, Arctic Fox and American Mink furs. From its establishment until 1992, it had a world-wide monopoly on the export of Sable skins. The annual turnover of furs offered at auctions reached USD150 million during the Soviet period (Anon., 2002).

As of 2003, the *Sojuzpushnina* All-Russia Association was the company in charge of the international fur auction that takes place in St Petersburg. **Figure 4** shows trade volumes for Sable skins at the auction during last 15 years. Trade in wild Sable skins at the St Petersburg auction decreased after 1991 until 1994. The increase in trade since 1997 may be partly as a result of credits allocated by *Sojuzpushnina* to regional businessmen for the purchase of furs. In 2000, volumes of Sable exceeded those recorded during the Soviet period. The primary causes of these fluctuations are discussed in *Causes of fluctuations in fur prices, harvest volumes and trade* .

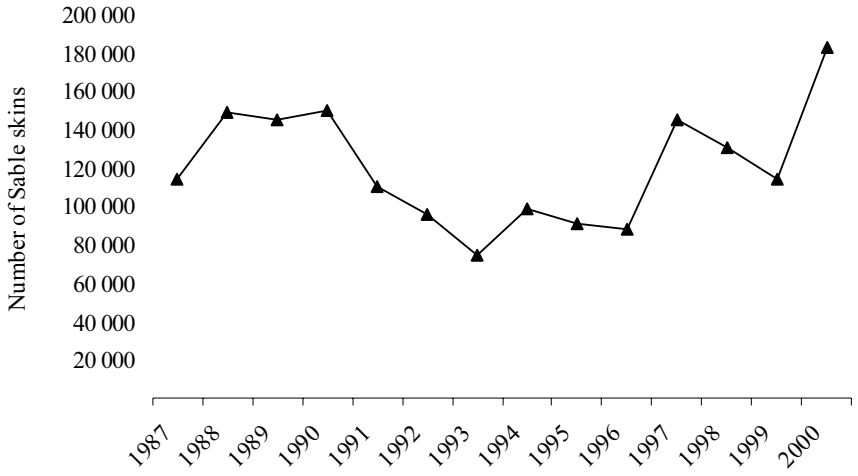

Figure 4. Trends in sales of wild Sable skins at the St Petersburg auction, 1987-2000.
Source: Sojuspushnina All-Union Association.

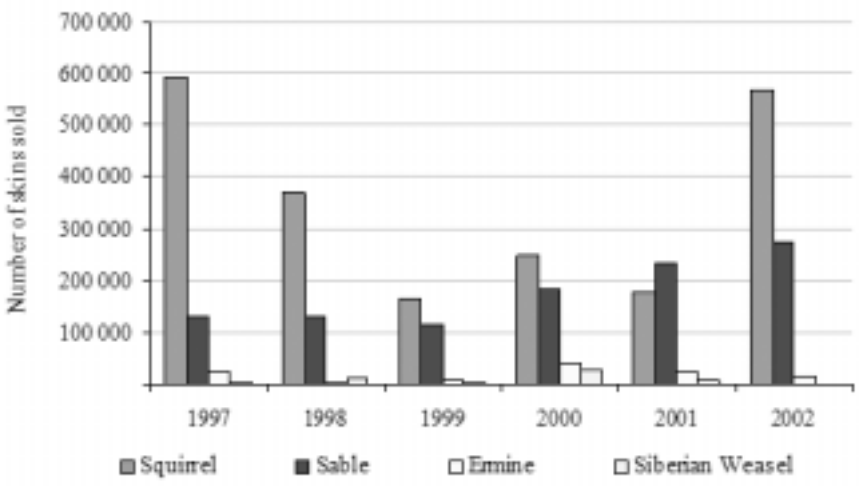

Figure 5. Trends in sales of wild skins at the St Petersburg auction. *Source: Sojuspushnina* All-Union Association.

Figure 5 shows sale volumes for Sable, Red Squirrel, Siberian Weasel and Ermine skins at the St Petersburg auction, 1997-2002. Sable and Squirrel are the most important fur species followed by the Siberian Weasel and Ermine.

In 1991, the annual turnover of the Russian fur auction abruptly decreased, from USD 61.5 million, to USD 34.6 million, in 1992, and to only USD14.3 million in 2001 (Anon., 2002).

Historically, traders from the UK, USA, Italy, Hong Kong and Greece have been the most important buyers of Sable furs (Evteev, pers. comm., 2003). The amount of Red Squirrel skins sold to China has recently increased rapidly. Most products are bought at auctions by a number of specialised intermediary companies. As the auction companies do not provide information on their final customers it is difficult to assess the fur volumes purchased by different companies. Besides the St Petersburg auction sales, furs are also

Table 7.

Comparison between the number of (wild) Sable skins harvested in the Russian Federation and the number offered at the St Petersburg auction, 1991-2003.

Auction year	Hunting season	No. of skins officially harvested	No. of skins offered at auction	% of harvested skins offered	Sold at auction
1992	1991-92	119 480	No data	-	95 300
1993	1992-93	190 254	No data	-	74 800
1994	1993-94	163 898	117 529	72	98 400
1995	1994-95	103 092	115 629	112	91 000
1996	1995-96	106 315	97 530	92	87 900
1997	1996-97	100 703	159 806	159	130 364
1998	1997-98	122 422	233 851	191	132 532
1999	1998-99	132 478	141 241	107	113 568
2000	1999-00	148 204	209 680	142	184 167
2001	2000-01	176 874	263 171	149	234 060
2002	2001-02	177 380	291 210	164	275 081
2003	2002-03	182 636	294 642	161	272 498

Sources: Tzentokhotkontrol and *Sojuzpushnina* All-Russia Association.

exported from the Russian Far East directly to other countries such as China, South Korea, Japan, USA, Denmark, Italy and Greece.

Trade in illegally harvested Sable fur

The wild Sable skins offered at the St Petersburg auction are all harvested in the Russian Federation. Therefore, the quantity of furs offered at the auction should not exceed the total amount of skins officially harvested in the country. However, there are discrepancies between the number of Sables harvested in the Russian Federation and the number of wild Sable skins presented at the auction.

Table 7 shows the number of Sable skins offered at the St Petersburg auction and the number of wild Sable skins officially harvested all over the Russian Federation, 1991-2003.

The table shows that the number of skins offered at auction has consistently been significantly higher than the number of skins officially harvested. A similar picture is apparent when comparing the harvest figures and the number of skins offered at auction by various regions after 2002/03 hunting season (**Table 8**).

It should be noted that, as the tables contain only the official harvest data, it is likely that the actual harvest levels exceeded these figures, (see *Harvest of fur in the southern part of the Russian Far East*). A comparative analysis of the figures in **Table 7** reveals substantial differences: in most regions, more skins are offered at auction than are officially harvested. The difference between the total number of Sable skins harvested in the regions listed in **Table 8** (145 183) and those offered (277 857) is 132 700 skins. Experts from the *Sojuzpushnina* All-Russia Association claim that furs delivered to auction from a particular region were harvested not only in that region, but also from other regions, but the assumption that a portion of the skins came from other regions does not explain this difference. According to official statistics, a total of 182 636 Sable skins (see **Table 7**) was harvested, 2002-03, across the Russian Federation; this is 112 000 less than the number offered at the auction in 2003. It is unlikely that unsold skins left over from the previous auction explain this difference, because the number of skins offered at auction has exceeded the official harvest by an average of 50% since 1997.

Illegally harvested skins could be sold on the black market, as well as at auctions. The fur black market appeared as a noticeable phenomenon in the USSR in the late 1960s and early 1970s. The primary factors that contributed to its development were private demand on the domestic market coupled with the strong State monopoly of the fur trade. The State monopoly channelled furs to international markets, which greatly

Table 8.

Comparison of the number of Sable skins offered at the St Petersburg auction in 2003 and the official harvest in the 2002-2003 hunting season in selected regions.

Region	No. of skins offered*	No. of skins officially harvested
Krasnoyarskiy Kray	35 874	26 000
Irkutsk Oblast	104 562	28 619
Chita Oblast	13 314	5431
Republic of Sakha	25 933	39 693
Kamchatka Oblast	2854	3048
Republic of Buryatia	4516	2771
Amur Oblast	35 215	5620
Primorskiy Kray	4147	6429
Khabarovskiy Kray	51 442	27 572
Total	**277 857**	**145 183**

Sources: *Tzentokhotkontrol* and *Sojuzpushnina* All-Russia Association.

* Data from September and December 2003 auctions are not included.

Table 9.

Number of skins of 'game species' seized by the Far Eastern Customs between 1991 and 2003.

Species	No. of skins seized
American Mink	5471
Red Squirrel	3797
Raccoon Dog	1486
Siberian Weasel	1136
Sable	1001
Red Fox	223
Muskrat	185
Mountain Hare	143
Eurasian Otter	223
Eurasian Lynx	4
Eurasian Beaver	2

Source: Far-Eastern Operative Customs Office of the Far-Eastern Customs Department.

hampered the development of the domestic fur market and resulted in excessive local demand. Moreover, market prices for furs were fixed by the State and increases in these prices usually fell below the general increase in prices for consumer goods. This situation led hunters to shift to alternative and more profitable options for selling furs, not only to achieve higher prices, but also to match the volume of demand to the volumes they could supply. The demand on the domestic market "met" hunters' supply. The black market could only be supplied with furs harvested in excess of annual quota limits, as hunters were obliged to sell all furs harvested within the quota to State agents. Illegally harvested furs were easily sold to intermediary traders or private buyers for prices two to three times higher than the official ones.

Illegal export and import of furs

Attempts to export furs illegally are regularly recorded at Customs border controls in the Russian Far East. Analysis of available information revealed a recent increase of such smuggling efforts in the Russian Far East. The most common contraband items are skins of Red Squirrels, American Minks, Arctic Foxes, Sables, Siberian Weasels and Muskrats. Illegal exports of Amur Wildcat, Eurasian Beaver, Eurasian Lynx, Raccoon Dog and Red Fox skins occur less often (see **Table 9**).

Russian Customs officers regularly discover travellers attempting to import finished fur products made of mink, Muskrat, Nutrias *Myocaster coypus*, Arctic Fox, Red Fox, marmots and other fur-bearers illegally into the Russian Federation. Countries of origin are Turkey, Greece and China. Since 2001, Russian Customs have also recorded cases of attempted illegal importation of skins from farms in China.

Trends in the value of fur

Prices paid to hunters

Sable skins have traditionally been distinguished according to the region of the harvest, size of the skin, fur colour and the type of primary processing. In 1973, prices paid to hunters for top-quality Sable skins varied, depending on their colour, from RUB28 to RUB100 for Barguzin, Kamchatka and Yakutian forms and from RUB24.5 to RUB56 for Amur, Minusinsk, Yenisey, Tobol and Altai forms. The official exchange rate at that time was USD1 = RUB0.6, but there was no foreign currency exchange for individuals and comparison of income and prices is more meaningful than the official currency exchange rate during the Soviet period (see **Methods**). As a guide to the value of the rouble during the Soviet period, salaries in cities commonly ranged between RUB120 and RUB200 per month. During that same period, top-quality Red Squirrel skins were

Confiscated sable skins (TRAFFIC Europe-Russia / Pavel Fomenko).

sold for between RUB1.3 and RUB3.2 depending on their colour.

Prices for furs increased considerably in 1983 (see **Table 10**). According to the 1983 pricelist, prices for Barguzin, Kamchatka and Yakutian Sable ranged from RUB110 to RUB200. Prices for Amur, Minusinsk, Yenisey, Tobol and Altai forms also increased and ranged between RUB79.2 and RUB144. Market prices for skins of farm-raised Sable remained the same after 1983. They ranged from RUB86 to RUB533 depending on their colour, darker furs being more expensive. Prices for Red Squirrel skins rose to RUB2 (Central form) and RUB5 (Yakutian form). With adjustments for defects and quality, actual prices paid to hunters were, on average, less than 60-80% of the listed market prices.

Table 10.

Average prices (RUB) offered to hunters, per skin, 1982-1988.

Species	1982	1983	1984	1985	1986	1987	1988
Red Squirrel	1.8	2.6	2.9	2.9	2.9	2.8	2.9
Sable	53.0	104.3	102.5	102.9	102.3	101.5	101.6
Eurasian Lynx	20.7	127.6	135.7	138.1	139.3	138.2	140.2
Eurasian Otter	33.5	99.0	109.2	108.3	109.2	113.1	111.7
Ermine	4.4	9.2	9.6	9.5	9.5	8.9	9.1
Muskrat	2.1	4.5	4.6	4.5	4.5	4.4	4.3

Source: Sukhomirov, in *litt*., 2003.

Since 1992, prices paid to hunters change often, not only regionally, but within regions. They are dependent on world fur prices and, more importantly, on prices at the St Petersburg fur auction. At first, the collapse of the USSR, which opened markets and created new trade opportunities and free competition among trade agents, resulted in a sharp increase in prices paid to hunters. This reflected traders' high expectations related to fur auctions. At the same time, official statistics for the 1991/1992 hunting season showed a decrease in

Table 11.

Prices paid to hunters for Sable skins in various regions in the Russian Federation between 1991 and 1996 (in USD per skin).

Region	1991	1992	1993	1994	1995	1996
European region	29.5	43.7	39.1	27.6	29.4	19.3
Ural region	27.0	8.2	11.8	23.1	16.0	8.6
Western Siberia	31.1	27.5	21.5	29.8	21.2	36.8
Eastern Siberia	40.1	29.6	26.4	32.4	26.4	36.4
Russian Far East	50.2	27.9	21.9	26.1	25.2	30.8

Source: Andreev and Telepnev, 1998.

harvest in 1992. Excessive supplies of furs (often of low quality) immediately led to a saturation of the market and to a rapid fall in international prices (see also next chapter). For instance, the average price for Sable skins dropped by 40%, from USD50.2 in 1991, to USD30.8 in 1996 (see **Table 11**). The only way for marketing agents to maintain their profits was to reduce the prices they offered to hunters. These new prices offered to hunters by commercial hunting enterprises no longer covered hunters' harvest expenses and were too low to maintain hunters' interest in the fur business (see **Table 11**).

Since 2000, however, the prices paid to hunters for Sable skins have increased and directly depend upon the clearance prices from the previous auction - prices increase immediately following successful auction sales.

Auction prices

Since 1991, price of fur skins fell sharply. According to the *Sojuzpushnina* All-Russia Association, average prices for skins of Yakutian and Amur Sables, for example, decreased by 50% from 1990 to 1997, falling from USD118 to USD59, and from USD81 to USD39, respectively. The price for Barguzin Sable decreased by 34 %, from USD138 to USD91. At the beginning of the 2000s, prices for all Sable skins (including from farmed animals) stabilized on the international market (see **Table 12**, **Figure 8**) and slowly increased again after 2002. The figures in **Table 12** clearly demonstrate that the overall value of the trade in Sable skins decreased by 25% between 1987 and 2003 (from USD20.7 million to USD15.3 million), despite the fact that the total volume of skins sold was more than double what it was in 1987, in 2003 (114 200 skins as compared to 275 081).

Like Sable furs, squirrel furs have also been in stable demand in recent years. In the early 1990s, a great number of amateur hunters refused to hunt squirrels. This was because prices for ammunition were high, it was difficult to obtain a weapon permit and the socio-economic situation was generally unstable. At the beginning of the 2000s, stable demand for Red Squirrel skins has stimulated hunting for the species. In 2000, all companies and marketing agents that bought squirrel skins paid between RUB60 and RUB75

Table 12.

Number of Sable skins sold and prices per skin (USD) at the St Petersburg auctions between 1987 and 2003.

Year	No. of Sable skins sold	Average price/Sable skin	Overall value of skins sold
1987	114 200	181	20 670 200
1988	149 100	152	22 663 200
1989	144 700	133	19 245 100
1990	149 300	121	18 065 300
1991	110 400	81	8 942 400
1992	95 300	72	6 861 600
1993	74 800	63	4 712 400
1994	98 400	74	7 281 600
1995	91 000	56	5 096 000
1996	87 900	84	7 383 600
1997	130 364	73	9 516 572
1998	132 532	65	8 614 580
1999	113 568	51	5 791 968
2000	184 167	49	9 024 183
2001	234 060	49	11 468 940
2002	275 081	51	14 029 131
2003	272 498	56	15 259 888

Source: Sojuspushnina All-Union Association.

(USD2.1 to 2.7) per squirrel skin; shipments of squirrel skins were sold for USD4.2 to 4.5 per skin at winter auction and later prices paid to hunters increased to RUB70-90 (USD2.4 to 3.1). Chinese buyers paid RUB100-110 (USD3.5-3.8) per skin in Khabarovsk and Ussuriysk and did not require high quality (Shvetz and Darenskiy, 2002; Zarubin, 2001). In 2002, prices paid to hunters for squirrel skins dropped to RUB35-55 (USD1.2 to 1.8). It is likely that the price will remain at this level for some time because the auction price for this product has not recently exceeded USD2.0. Almost 570 000 squirrel skins were sold at the St Petersburg auction in 2002, with a total value estimated at around USD1.1 million.

Production of fur in farms

Reduction of fur produced in Russian farms

Since the early 1990s, economic interest in farming fur-bearing mammals has decreased as a result of the severe economic crisis in the Russian Federation. The number of fur farms in the Russian Federation has halved and halved again since 1991 and now only approximately 150 farms remain. The first fur farms to close were small farms located far from sources of animal fodder and/or sales outlets. Many faced financial difficulties because of the low prices they received for their products, the high cost of fodder, electricity and transportation, accrued debts and cash-flow problems. These financial problems resulted in decreased productivity (see **Table 13**). The overall production of American Mink and Arctic Fox declined from 16.9 million individuals, in 1991, to three million individuals in 2000, i.e. more than a five-fold reduction was recorded.

The most noticeable decline in fur production began in 1996, when the federal government nearly stopped financing Russian fur farming, which traditionally belonged to the State. During the following four years, production decreased annually by around 20% and relative to the early 1990s was 3.5-fold.

Fur farming in the Russian Federation fell victim to increasing fodder prices rather than "anti-fur" campaigns. A large portion of the commercial fishing products that previously constituted animal fodder for fur farms began to be exported (Anon., 2002). Fodder price increases were exacerbated by increased transportation expenses, which almost completely destroyed fur farming. Only Sable farms survived. In 2003, 20 000 to 25 000 skins from farm-raised Sables were being produced annually in the Russian Federation (Evteev, pers. comm., 2003).

Prices of fur produced in farms

Differences between prices for farmed furs on the domestic market and at international auctions (see **Table 14**) reflect the difference of quality amongst raw products offered on each of these markets. Based on almost all typical variables (size of the skin, colour and the quality of primary dressing), the quality of furs produced in Russian farms falls below that of imported furs. More than 80% of American Minks are

Table 13.

Production of furs from farms in the Russian Federation.

Species	Production (x 1000 individuals/year)	
	1991	2000
American Mink *Mustela vison*	8919	3100
Arctic Fox *Alopex lagopus*	805	600
Red Fox *Vulpes vulpes*	192	130
Polecats *Mustela eversmanni* and *M. putorius*	336	35

Source: Safonov, 2002.

Table 14.

Prices for farmed furs in 2002 in the Russian Federation and at international level (USD).

Species	Mink	Arctic Fox	Red Fox	Sable
Domestic prices (Russian furs)	12-30	30-53	28-50	50-150
Sojuzpushnina auction, St Petersburg	10-12 (females) 20-34 (males)	42-59	42-86	70-100
Canada Auction[1]	20-39 (females) 34-56 (males)	-	53-98	-
American Legend[2], Seattle Auction	16-40 (females) 32-56 males	60-85	60-92	-
Copenhagen Auction[3]	13-31 (females) 25-41 (males)	17-93	42-97	-
Helsinki Auction[4]	17-24 (females) 32-53 (males)	29-115	55-121	-

[1] *North American Fur Association (Hudson's Bay Company),* [2] *Seattle Fur Exchange,* [3] *Copenhagen Fur Centre,* [4] *Finnish Fir Sales. Source:* Minkov, in *litt*., 2003

standard dark-brown animals and, correspondingly, less than 20% are of the colour breeds (sapphire, pastel, silver-blue, etc.) with more expensive furs.

Prices and volumes of skins from farm-raised Sables at the St Petersburg auction (according to data provided by *Sojuzpushnina* All-Russia Association) are shown in **Figure 6**. Fluctuations in prices and volumes are determined by the state of the market. In the early 1990s, fur producers were privatised and became economically independent and were able to sell furs on the open market. Many producers closed their farms, killed their animals and auctioned skins to raise money quickly. This resulted in a sharp rise in the supply of furs from farm-raised Sables at auction in 1994 to 1995 and caused prices to fall.

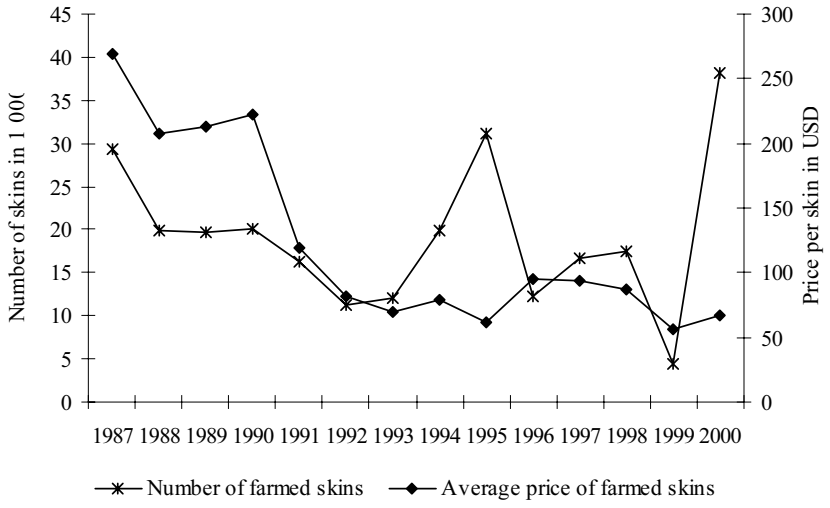

Figure 6. Prices and volumes of skins of farmed Sable at St.-Petersburg auction, 1987-2000.
Source: Sojuspushnina All-Union Association.

Almost all captive-bred Sables are dark and the decrease in demand in 1999 may be connected to a change in fashion in favour of paler Sable. In 1999, only 12% of the furs from farm-raised Sables presented at the *Sojuzpushnina* All-Russia Association auction were sold, while 80% of wild Sable furs were sold.

Relationship between exports and imports of fur produced in farms

The decrease in production of farmed furs, together with the simultaneous increase in demand for fur products, made importation of furs necessary. The Russian Federation gradually changed from being an exporter of furs, to being one of the main fur importers. In the early 2000s, the Russian market consumed up to 35% of "farmed furs" (finished goods, semi-finished products and raw furs) produced in the world. The share of Russian furs in this sector of the fur market was less than one-third (Shapochkin, 2002).

According to official data, 333 000 American Mink skins were exported from the Russian Federation for about USD6 million in 2000, and 533 700 skins, worth USD6.7 million, were imported that same year (Anon., 2002). Equivalent values for Arctic and Red Fox skins equalled USD6000 and USD960 000. These figures relate only to raw furs (not semi-finished products, such as dressed skins) recorded in official Customs statistics.

CAUSES OF FLUCTUATIONS IN FUR PRICES, HARVEST VOLUMES AND TRADE

The following factors are considered key causes for the fluctuations in fur prices, harvest volumes and trade since 1991:

- the collapse of the State monopoly on fur supply and trade;
- a decrease in fur quality; and
- decreased demand from the traditional Western market ("high society") and a shift to a new customer base ("middle-class")

Collapse of the State monopoly on fur harvest and trade

Between 1991 and 1992, the centralized State system of fur supply (including purchase from hunters and game enterprises) collapsed. All supply systems rapidly moved to the private sector (initially private individuals or small companies). This caused a decrease in the volume of furs purchased during the period from 1992 to 1996 because hunters could not sell furs to traditional marketing agencies, advance payment and the supply of equipment to hunters was stopped, and travel to hunt in remote areas, far from key markets, was no longer subsidized by procurement operations. Together with the general liberalization of foreign trade, these influences caused a downturn in sales of wild furs at the St Petersburg auction (see **Table 12**). By 1997, a new pattern of fur purchase (from hunters and game enterprises) by private companies was established. This pattern allowed for rapid growth in volumes of trade, which since 2000, have exceeded the pre-crisis (1992) levels. Although it was not accompanied by a price increase, the stable increase in auction sales of wild Sable skins since 1999 suggests an increase in demand (see **Table 12**). This may be related to the fact that demand for Sable furs has moved to a less affluent sector of the market; traditionally Sable furs were bought by the wealthy (see next chapter).

Decrease in fur quality

Stable prices and sales of furs at St Petersburg auctions during the period 1982 to 1990 allowed trading agents to plan their purchases and to promote the maintenance of high prices. Products offered at auction were carefully selected and sorted. In the USSR, furs provided by hunters were accepted only if they met the high standards required by the State. Requirements for skin quality and processing methods were uniform nation-wide. Additionally, furs were processed and sorted at specialist centres and only the best were selected for sale at auctions. Defective and low-quality skins were never presented at auction and instead

were sold domestically. This system maintained high world prices for Sable fur during the years when fur was considered a product for "high society".

Reforms of the late 1980s and early 1990s led to a diminishment of State control over the quality of furs for export. Together with the opening of the market and trade liberalization, which ushered in numerous undiscerning traders, these changes resulted in the widespread appearance of low-quality skins from the Russian Federation on the international market. Decreased fur quality and increased supply caused prices in 1993 to have dropped by 250% relative to those in 1988 (from USD151 to USD63). Sable lost its image of a "luxury" good but became affordable to a much broader sector of middle-class consumers.

Reduced demand from traditional Western markets and shift towards a new customer base

As a result of an increased interest in wildlife protection and the subsequent change in consumers' behaviour in the West in the late 1980s, the demand for furs, started to decline among traditional purchasers of Russian furs in Western countries, such as in Europe and in the USA. Sellers decreased prices in an effort to try and maintain the demand, but they were unsuccessful and the volume of the trade dropped. Trade volumes and prices fell simultaneously in the early 1990s.

In recent years, the fashion industry in the Russian Federation and abroad has undertaken efforts to bring fur back into fashion. The new customer sector is relatively broad, but much more sensitive to price levels - while large volumes of fur may be consumed at the current low price, customers could drop away if prices increase. This can explain the rapid increase in Sable fur sales at stable, but low, prices since 2001.

SOCIO-ECONOMIC IMPORTANCE OF HUNTING AND TRAPPING FOR FUR AND RECENT CHANGES

Brief overview of the socio-economic situation in the Russian Far East

The population of the Russian Far East is estimated to be just under five million people according to a 1998 census. This number is 4.5 percent less than ten years ago, mainly due to emigration from the region to other parts of Russia and the former Soviet Union, where the quality of life is better (Darman *et al.,* 2003). The majority of the population live in the south, where population density is 15 people per square kilometre compared to only 0.5 people per square kilometre in the north. The per capita gross regional product in 1996 was USD3100, which 1.2 higher than the average Russian output, but real income per capita has gone down during economic reforms due to high inflation, devaluation of the rouble, and changes in consumer spending. Official unemployment statistics of the economically active population is around 12 percent in Primorsky Kray and Khabarovskiy Kray and more than 18 percent in Amur Oblast, however, in reality unemployment rates are two to three times higher, since many people are not officially registered (Darman *et al*., 2003). Due to its remote location from Russia's capital, the Russian Far East is one of the most expensive regions in Russia and development to serve markets in distant regions of Russia is not always economical. The region is now experiencing a deep economical crisis, where elementary needs such as heat and electricity are often lacking and wages are withheld. As a result, both social and economic sectors suffer from this uncertainty (Darman *et al*., 2003).

Hunting for fur, a segment of Khabarovskiy Kray's economy

Prior to 1993, when the law *On game use on the territory of Khabarovskiy Kray* was adopted, hunting and trapping for fur was free. The new law required obligatory payment for the use of game animals. For game land-holders, this payment covered leasing game land and licenses for the harvest of ungulates. In 1999, a new, unified payment system for using game resources was introduced in the Russian Federation. Payment

Table 15.

Revenues to Khabarovskiy Kray from dues for the exploitation of game resources (in RUB1000).

	1994	1995	1996	1997	1998	1999	2000	2001
Harvest permits*	151.9	313.4	401.1	576.3	230.6	2368.5	2128.6	3431.1
Lease of lands	231.3	494.5	541.9	713.3	886.2	-	-	-
Landholders' taxes**	-	-	-	-	2817.5	5068.2	16 287.8	15 483.8
Total	**383.2**	**807.9**	**943**	**1289.6**	**3934.3**	**7436.7**	**18 416.4**	**18 914.9**

Source: Sukhomirov, in *litt*., 2003.

* Total amount paid for permits to harvest all game animals (there is no figure available for the sum paid for the harvest of only 'fur-bearing' animals).

** All revenues to the kray and district from all activities of all game agencies of the Khabarovsk Kray are included.

for leasing game land was eliminated and local taxes for game land-holders were established (see **Table 15**). Payment for permits to harvest fur-bearing animals and other game species have been required since 1999 and, as a result, government revenues from have increased substantially.

The direct income from hunting activities in the kray, i.e. payment for harvest permits and taxes paid by game land-holders, represented only 0.3% of the kray's overall annual revenue. According to estimates from experts, income from dues payable to hunt and trap for fur accounted for approximately 30% of the total game sector revenue, which translates to less than 0.1% of the kray's revenues (Sukhomirov, *in litt.*, 2003). However, interviews with hunters conducted during this study revealed that hunting and trapping for fur was of great importance in supporting the livelihoods of local and indigenous people, if not for the State treasury in the late 1990s and early 21st century. These interview findings are presented and discussed in the following chapter.

Profitability of hunting and trapping for fur and its role in livelihoods in the Russian Far East

Number of hunters; types of hunters

There are no official statistics on the number of hunters (Sukhomirov, in *litt*, 2003). In Khabarovskiy Kray, the estimated number of hunters fluctuated between 2850 to 3550 from 1982 to 2001; the highest numbers were estimated for the late 1980s and early 1990s, when fur supply was at its most plentiful. Between 17 and 20% of the hunters were professional hunters (Sukhomirov, in *litt*., 2003). Hunters represented about 0.2% of the population of Khabarovskiy Kray.

Approximately 25% of the 308 hunters interviewed for this study said that hunting was their main source of income, while about 12% appeared to be professional hunters (working on a full-time basis). About 50% of the 308 hunters questioned believed that most residents of their villages were engaged in hunting for profit; the other 50% believed that less than half of their neighbours hunted. Based on respondents' opinions, the number of hunters has not decreased over the last 15 years and has even slightly increased. More than 50% of the hunters mentioned not only the financial incentive to hunt, but also their passion for hunting. Approximately 45% of interviewees noted this passion as being a key motive for hunting. Some respondents considered hunting to be a family tradition.

Age, social and ethnic composition of commercial hunters

According to Rogachev (1985 and 1986), commercial hunters in the Russian Far East included men in the prime of their life, in the mid-1980s. Professional hunters averaged 36 years of age, one in three commer-

cial hunters was under 30 and less than 15% were older than 55.

The average age of hunters interviewed for this study was 44 years (91% were 30 years or older). Approximately 50% of all respondents had been hunting for more than 20 years and 45% for between five and 20 years. No more than seven per cent had been hunting for less than five years. With a few exceptions, commercial hunting was not popular among young people in the districts surveyed and only a few of them claimed to be actively interested to it. Eighty-three per cent of professional hunters had been hunting for more than 20 years and none had been hunting for less than five years.

Udege hunter. Krasniy Yar village (© WWF-Russia / Gennady Shalikov).

Most professionals were found to be Russians and Ukrainians. The composition of hunters in terms of ethnicity and/or nationality generally reflects the make-up of the regional population as a whole, except in the case of indigenous peoples. The proportion of indigenous communities (e.g. the Nanai, Udege and Evenk) among hunters is higher than in the general population, reflecting the fact that commercial hunting is a traditional occupation within these ethnic groups. Such indigenous groups comprise 1.5% of the population of the region, but they make up 15% of professional hunters and more than 18% of seasonal hunters (Rogachev and Rogachev, 2002). According to interview results from this study, 19% of the hunters were from indigenous minorities (the Nanai, Evenk, Ulchi, Nivkh, Even, Udege, Negidal and Orocs). The fact that 72% of such indigenous people interviewed for this study appeared to be professional hunters suggests that hunting, including for fur, plays a significant role in these peoples' lives.

Changes in the profitability of hunting and trapping for fur

The number of animals a hunter harvests does not vary much from year to year and depends on natural factors (Minkov, *in litt*, 2003). For example, the average Sable harvest per hunter is 50 to 70 per season. In the mid-1980s, professional hunters earned about RUB2300 per season in the southern part of the Russian Far East, while amateur hunters received between RUB500 and RUB600 (Rogachev, 1985 and 1986). A portion of harvested furs sold on the "black market" added an additional 50–100% of these sums to earnings. This meant professional hunters earned as much as qualified workers in the timber industry or university professors. However, they had to invest a considerable portion of their income in their hunting activities. For example, employees of the game industry spent more than RUB500 (20% of their income) on such investments every season. Those who were under short-term contracts had to invest about RUB200 (30% of their income). Transportation expenses (fuel and vehicle maintenance for journeys to and from hunting grounds) accounted for about 40% of these sums (Minkov, *in litt*., 2003).

During the 2002/03 hunting season, most hunters (87%) said they earned a maximum profit of USD350. However, based on the levels of illegal harvest of furs (see *Harvest of fur in the southern part of the Russian Far East*), it is assumed that this figure is an underestimate and that seasonal profits normally reach USD500 to USD1500, taking into account skins that have been illegally harvested (Fomenko, *in litt*. 2003).

Estimates of profits per hunting season vary considerably depending on the location of the hunting grounds. Information obtained through interviews revealed that expenditure in preparation for the hunting season varied significantly, ranging from less than USD100 to over USD300 and averaging USD133. Hunters

Table 16.

Comparative value of Sable skins in the 1980s and early 2000s.

Product	No. of Sable skins equivalent to the cost of consumer goods	
	1980s	**2000s**
Equipment and transport		
100 traps	1.5-2	5
100 shotgun cartridges	0.3	1
100 rifle cartridges	0.016	0.2
100 litres of petrol	0.5	1.4-1.5
Gun	2-3	10
Boat engine	8-10	30
Snowmobile	35-40	> 100
Food products		
Sugar, one kilogram	0.01	0.025
Milk, one litre	0.003	0.02
Meat, one kilogram	0.05	0.1

Source: TRAFFIC Europe-Russia research

were asked to compare costs and benefits for the 2002/03 hunting season. Most of them (68%) profited and the rest either broke even or ran a deficit. On the whole, the season was more profitable for hunters in Primorskiy Kray than for hunters from Khabarovskiy Kray. More than half of the respondents noted that their profits did not amount to double their expenses.

To better understand the purchasing power of furs before 1991 relative to their purchasing power in the present day (2003), as well as to provide a scale against which to assess fur prices and hunters profits, the costs of some basic everyday goods and goods required for hunting season are provided in **Table 16**. These costs are expressed in terms of numbers of Sable skins (based on the price paid to a hunter for one skin in the 1980s and early 2000s). These data demonstrate that considerable changes have taken place in hunters' livelihoods since 1991. Over the course of 20 years, Sable skins dropped in value to between a third and a fifth of what they were.

Between 1980 and the early 1990s, professional hunters, whose harvest consisted mostly of furs, were particularly dependent on the resource. The rest of their income from the winter hunting season came from selling animal meat and other animal derivatives. A small number of professionals was able to harvest 100 to 120 Sables per season, which ensured a fairly prosperous life for a hunter's family during the Soviet period. In the first years of the 21st century, profit from the sale of 100 Sables is equivalent to RUB80 000 (about USD2800), which is less than the official minimum subsistence level for a family of three to four. In 2001, the mean official subsistence level for Khabarovskiy Kray was estimated at RUB1969 (USD67.5) per person, per month (Anon., 2001); for a family of four this equates to USD3240 annually.

Approximately 50% of those hunters interviewed for this study believed that hunting and trapping for fur had become less profitable over the last decade. They believed that the fall in fur prices was the primary cause for this (see *Trends in the value of furs*), together with the decline in the number of animals (see *Population status and trends of 'game species' in the Russian Far East*). A general decrease in the standard of living for their families was noted by 47% of the respondents.

Because fur prices are a third to a quarter of what they were and because the purchasing power of the value of one skin is a third to a fifth of what it was, hunters can no longer afford to go to remote hunting grounds (those over 150 km from their settlement). This fact has resulted in the following consequences:

- large expanses of land are no longer visited by hunters and serve now as breeding and feeding grounds for fur-bearing animals; and
- fur-bearing animals in areas around human settlements have started to become overexploited.

USE OF OTHER WILDLIFE AS ADDITIONAL SOURCES OF INCOME AND POSSIBLE CONSERVATION IMPACT

Use of non-timber forest products

A particular feature of the Russian Far East is that despite the large share of people living in cities (76% in 2003), most are closely linked to natural resources use (Darman *et al.*, 2003). Seventy five percent of the hunters interviewed for this study reported to harvest and hunt also other wildlife resources in addition to fur-bearing animals to supplement their income. Nuts, edible plants and berries are among the most commonly harvested products (see **Table 17**). The different types of wildlife harvest and hunting (including hunting and trapping for furs) constituted at least half of their family's income and for 20% of them it represented their primary source of income (see **Table 18**). This share was considerably larger among families of professional hunters that hunt on a full-time basis: the income from the use of wild plants and animals (including the use of furs) made up more than half of the family's budget for 94% of the professional hunters interviewed.

Use of and trade in species of conservation concern in the Russian Far East

In addition to berries, nuts other non-timber forest products hunters may also use other wildlife, including species that are protected to supplement their income. Poaching has been increasing since the break-up of the Soviet Union and there have been concerns that the changes in the fur trade in the Russian Far East may have played a role in this development. With the opening of the borders in the early 1990s new opportunities for trade arose. As a consequence of the new and increasing demand from neighbouring countries for species that are used for traditional East Asian medicine, such as bears, ginseng, musk deer, other ungulates like Siberian elk, also known as Red Deer *Cervus elaphus* or Sika Deer *Cervus nippon,* or Tigers, many animal and plant species in the Russian Far East have been subject to increasing levels of exploitation relative to pre-Soviet times (Chestin, 1998; Vaisman *et al.*, 1999). The status and level of populations for some of these

Table 17.

Most common flora collected by hunters and the relative additional generated income.

	Harvested by % of respondents	Responses on Income High	Medium	Low	Unsure
Korean Pine nuts *Pinus koraiensis*	81	32	27	8	14
Edible plants (ferns *Pteridiam aquilinum*, bear onion *Allium ursinum*, etc.)	78	1	9	44	24
Wild berries*	71	1	10	36	24
Magnolia vine *Schizandra chinensis*	58	2	17	25	14
Russian Ginseng *Panax ginseng*	50	31	10	3	6
Siberian Ginseng *Eleutherococcus senticosus*	36	1	9	20	6
Other medicinal plants**	31	1	3	18	9

* For example: Amur grape *Vitis amurensis*, Aktinidia kolomikta vine *Actinidia kolomikta*, cowberries *Vaccinium vitis-idaea*, blueberry *Vaccinium uliginosum*, honeysuckle *Lonicera edulis*, arrowwood raisin *Viburnum sargentii*, raspberry *Rubus* spp., currant *Ribes* spp., brid-cherry tree *Padus asiaticia.*

** For example: Manchuriam aralia *Aralia mandchurica,* Asian devil's club *Oplopanax elatus,* Manchurian birthwort *Aristolochia manshurensis,* Ochotskiy clematis *Atragene ochotensis,* Amur oak tree *Phellodendron amurense,* Marsh tea *Ledum palustre ,* Golden root *Rhodiola rosea.*

Mushrooms are an important source of additional income (TRAFFIC Europe / Caroline Raymakers).

species that are of conservation concern are briefly presented below, as introduction to the chapter of discussion on the possible reasons for their increased exploitation.

Population status and trends for selected species of conservation concern

Amur Tiger *Panthera tigris altaica*

The Amur Tiger is listed in CITES Appendix I, in the *2004 IUCN Red List* as Critically Endangered (Anon., 2004) and in the Second Category of the Red Data Book of the Russian Federation, as a rare subspecies existing only within the territory of the Russian Federation. The last full range survey of the Amur tiger population was conducted in 1995-1996 and the population was estimated at 415 to 476 individuals, of which 330 to 371 were adults (Matiushkin *et al*, 1997). No new populations surveys have been conducted since then but monitoring since then suggest that the population has declined, but details are uncertain. Poaching of the tiger as well as the tigers prey is considered one of the main threats to the species. The increase in poaching levels is seen mainly a result of the increasing demand for Tiger body parts and derivatives for use in traditional oriental medicines which occurred after the opening of the border in the early 1990s (Fomenko, 2000). Other key threats are the decline in the numbers of ungulates - main prey base of Tigers - which are hunted for subsistence, and the loss of habitat owing to destructive land use (logging and industrial activities).

From 2000 to 2003, more than 80 Tigers were shot by poachers and more than 30 persons were sentenced for illegal activities associated with the trade in Tiger derivatives between 1994 and 2001 (WWF/TRAFFIC Europe-Russia data).

Table 18.

Annual income for hunter from wildlife products collected and sold as additional income (in USD).

Wildlife product	**Income generated per year** (in USD)
Velvet antlers *Cervus* spp.	200 - 500
Siberian Ginseng *Eleutherococcus senticosus*	100 - 300
Magnolia vine *Schizandra chinensis*	100 - 200
Aralia *Aralia* spp.	100 - 300
Salmon/salmon roe *Oncorhynchus* spp.	400 - 1200
Pine nuts *Pinus koraiensis*	1000 - 2000
Meat of mammals	500 - 1000
Berries/mushrooms	200 - 400

Source: P. Fomenko and M. Krechmar, pers. com., 2004.

Amur Leopard *Panthera pardus orientalis*

The Amur Leopard is listed in CITES Appendix I and in the *2004 IUCN Red List* as Critically Endangered (Anon., 2004) and is listed in the First Category of the Red Data Book of the Russian Federation as a species approaching extinction in the Russian Federation.

According to a population survey undertaken in 1997, the population is an alarming 29 to 31 individuals. The 1998 census, which employed a different methodology, yielded an estimate of 40 individuals (Anon., 1999). One of the major threats is the shortage of an adequate prey base and the destruction, fragmentation and loss of habitat. Poaching for skins and other body parts used in traditional oriental medicine is another important threat. Between 2001 and 2002, more than 13 Amur Leopards were killed by poachers and three hides were confiscated in 2002 (TRAFFIC Europe-Russia staff, pers. comm., 2003).

Smaller carnivores of conservation concern

Amur Steppe Polecat *Mustela eversmanni amurensis*

Conservation status: The subspecies is not listed in the CITES Appendices, but is listed in the 2004 IUCN Red List as Vulnerable (Anon., 2004) and in the Second Category of the Red Data Book of the Russian Federation as a declining subspecies which is isolated from all other steppe polecat subspecies and is on the verge of extinction.

Population: The current population is unknown. According to experts, the subspecies is on the verge of extinction. Until the 1950s, the Amur Steppe Polecat was a fairly common, although not abundant, commercial fur species. Since 1960, only a few skins have been supplied to procurement offices and, in recent decades, animals have not been trapped every year (Yudin, 1981; Nikolaev, 1979; Kolosov, 1980). Destruction of the species' main habitat types is seen as one of the main threats. As a result, the population of Amur Steppe Polecats in their native habitat has decreased and their distribution has become patchy.

Amur Leopard Cat *Prionailurus euptilura*

The species is listed in Appendix 3 of the Red Data Book of the Russian Federation as a species requiring particular attention to its state in the wild. According to experts' estimates, the number of Amur Leopard Cats in south-western Primorskiy Kray, where most of the population is found, does not exceed 500 to 600 individuals (Dunishenko, 1977). It is estimated that fewer than 1000 animals inhabit the entire Russian Far East and that the species has declined almost everywhere since the 1980s, primarily owing to the impact of human activities. In some places, these cats have become extinct or extremely rare (Sludskiy, 1973; Dunishenko, 1977).

Alpine Weasel *Mustela altaica raddei*

Conservation status: The Far Eastern population of this species is not listed in the CITES Appendices nor in the 2004 IUCN Red List (Anon., 2004), but is included in the Second Category of the Red Data Book of the Russian Federation as a declining population requiring verification of taxonomic status.

Population: The status of the Alpine Weasel can only be estimated using "indirect data" (i.e. reported harvest quantities). Until the 1950s, the Alpine Weasel was a common commercial species; later a rapid decline in its numbers occurred. The recorded harvest of the species in the Amur Oblast decreased from 3000 individuals in 1950, to 600 to 800 animals in the 1960s. It fell to a few dozen animals per year in the late 1980s (Anon., 1981). Destruction of the species' natural habitat and an expansion of agricultural lands are principal causes for the decline in the species' population (Yudin, 1981).

Indian Marten *Charronia flavigula*

The species is listed in Appendix 3 of the Red Data Book of the Russian Federation as a species requiring particular attention to its status in the wild. According to experts, the population is estimated at 2000 indi-

viduals (Sukhomirov, pers. comm., 2003); hunters' observations suggest that numbers have been stable since the early 1990s (see **Figure 2**).

Brown Bear *Ursus arctos* and Asiatic Black Bear *Ursus thibetanus*

The Brown Bear is listed in Appendix II of CITES, but is not listed in the *2004 IUCN Red List*. The Asiatic Black Bear is listed in Appendix I of CITES and is listed as Vulnerable in the *2004 IUCN Red List* (Anon., 2004). Both species are listed in Annex A of the EU *Wildlife Trade Regulations* (*Council Regulation (EC) No 338/97* and related Commission Regulation. In 1999, the number of Brown Bears in the Russian Federation was estimated at 121 900 individuals (Lomanov, 2000) and the official Brown Bear population for the Russian Far East was put at 11 900 for Khabarovskiy and Primorskiy Krays, Amur Oblast and the Jewish Autonomous Oblast. In the Russian Federation, the Asiatic Black Bear is found only in the Far East and the population has been estimated at 5600 individuals (Lomanov, 2000).

Demand for bear products in East Asia, mainly gall bladders but also other parts such as bear paws, has also affected bear populations in the Russian Far East. During 1998 and 1999, wildlife inspectors seized four kg of bear gall bladders and 27 bear paws and in May 1999, Custom officers at the Airport in Vladivostock seized seven kg of dried bear gall bladders from a Russian citizen who intended to travel to South Korea (Kopaev, 2000).

Siberian Musk Deer *Moschus moschiferus*

The Siberian Musk Deer is listed in Appendix II of CITES and is classified as Vulnerable in the *2004 IUCN Red List*. In the Russian Federation, Musk deer in general are classified as hunting species and are hunted under license, however in some areas hunting has been banned, for example, in the Amurskaya Oblast and the Jewish Autonomous Oblast in the Russian Far East (Homes, 2004). The Siberian Musk Deer is the only species of musk deer that occurs in the Russian Federation. They are distributed mainly in the mountain taiga and the species range extends from south-central Siberia, through eastern Siberia to the Russian Far East. Within the species range the distribution is fragmented and density of population varies. Population surveys conducted between 2001 and 2003 concluded that the numbers of Siberian Musk Deer in the Russian Far East was approximately 140 000 and the population was considered stable (Homes, 2004). However, poaching of Siberian Musk Deer in the Russian Far East has become a widespread problem since the break-up of the Soviet Union and the opening of the borders and nowadays the level of poaching outstrips legal harvest (Homes, 2004). The deer is hunted for its musk that is in demand primarily for traditional East Asian medicine.

Russian Ginseng *Panax ginseng*

The Russian Population of the Russian Ginseng *Panax ginseng* is listed in Appendix II and the species is included in the Russian Red Data Book. Harvest from the wild is generally not allowed, however populations have been severely reduced, primarily by over-harvesting for domestic and international trade, but also by logging, habitat degradation and forest fires (Vaisman, 2004). The species has long been traded for medicinal purposes in significant quantities and demand for wild harvested *P. ginseng* roots remains high. Since the mid-1990s the annual harvest quotas decreased consistently, and a zero harvest quota was set in 1998. Enforcement is problematic, and substantial quantities of wild harvested roots are being exported illegally to China (500 kg or more each year) (Vaisman, 2004). According to hunters interviewed from Primorskiy and Khabarovskiy Kray, ginseng is nowadays the most profitable species.

Use of and trade in species of conservation concern

During the Soviet period many of these species were not exploited at all or only for subsistence purposes or to supply demand at the national level. In the past only velvet antlers of Siberian elk and small quantities of Saiga horn had been exported by the State to China (Chestin, 1998). All exports were state-controlled and because of the State monopoly on all international trade and the closed borders of neighbouring countries, such as China and South Korea, there was no demand for many of these species and all wildlife hunted and

harvested in the Russian Far East was traded on the domestic market only. Even illegally hunted species were mostly sold on the domestic markets because of the strict border controls and the limited international contacts (Chestin, 1998). In addition, Soviet legislation prohibited private trade in hunting species. For example, it was impossible for a hunter to sell the meat of legally harvested Moose *Alces alce*s. Nevertheless, trade in wild meat, hides and other wildlife products, such as plants and berries, already existed during the Soviet times, but such products could only be traded between neighbours and relatives. Often wildlife products were exchanged for agricultural products but there was no sustainable market for these goods and no market prices.

The period of *perestroika*, especially since 1990, brought dramatic changes that paved the way for increased wildlife exploitation and international trade, often illegal. These factors included the opening of state borders, weakening of customs controls, impoverishment of the majority of the people, new opportunities for private enterprises and reduced governmental funding for state services, including nature protection (Chestin, 1998). There have been indications that, because of these factors and their reduced income from fur, hunters in the Russian Far East have had to turn to alternative activities to generate income, including new and illegal types of hunting or harvesting of protected species. These new species were often of a higher market value than those traditionally hunted and trapped for fur. During interviews conducted for this study, many hunters concurred with this view and mentioned the harvest of relatively rare plants and animals. Thirteen per cent of the interviewees which took part in this study admitted that they had hunted in recent years for bears and sold their paws and gall bladders to Chinese customers, 10% admitted that they illegally

Table 19.

Prices on the domestic Russian market for selected wildlife products in 2003 and 2004.

Species/product	Year	Price in USD
Siberian Musk Deer *Moschus moschiferus* pod	2003	3-4/g
Bear *Ursus arctos/Ursus thibetanus* gall bladder	2003	3-4/g
Bear *Ursus arctos/Ursus thibetanu*s paws	2003	100-130/kg
Ginseng *Panax ginsen*g root	2003	12-20/g
Tiger *Panthera tigris* bones	2003	3000-8000/skeleton
Dried seacucumbers *Apostichopus japonicus*	2003	140/kg
Sturgeon *Acipenser schrenki/Huso dauricus* caviar	2004	240/kg
Sturgeon *Acipenser schrenki/Huso dauricus* meat	2004	12.5/kg

Source: TRAFFIC Europe-Russia data, 2003 and 2004.

Table 20.

Seizures of wildlife products in the Russian Far East between 1994 and 2002.

	1994	1995	1996	1997	1998	1999	2000	2001	2002
Amur Tiger, skins	14	2	4	11	6	3	13	3	4
Amur Leopard, skins	0	0	2	0	2	2	2	0	3
Siberian Musk Deer, glands		165	52	106	77	111	119	5	65
Bear*, gall bladders					4	7 kg			
Bear*, paws					4	23			
Russian Ginseng, roots (kg)		36	7.4	9.1	36.3	6.2			

* Refers to Asiatic Black Bear and Brown Bear; Empty fields indicate no data available.

Source: TRAFFIC Europe-Russia data, 2003.

hunted for musk deer and three (0.9%) said that they had sold Tiger bones and hides.

Most of the products from these other wildlife species are much more valuable than fur (see **Table 19**). Not all species included in the table, in particular sea cucumbers and sturgeon, are likely to be targeted as an alternative to fur by hunters and trappers for fur. Some wildlife products are recorded because of their high market prices and because they are destined for export markets that are likely to be supplied by similar marketing channels and traders as those involved in the trade of species targeted as alternatives to those hunted for fur. These additional species are also threatened with overexploitation and some are endemic to the region, such as the two sturgeon species.

Confiscated roots of Russian Ginseng *Panax ginseng* (TRAFFIC Europe-Russia / Sergey Liapustin).

The majority of these species are hunted primarily to supply demand in neighbouring countries where they are used in traditional medicines. Smuggling along the southern border of the Russian Far East has become an increasing problem and customs regularly discover wildlife products such as Tiger skins, bear gall bladders or Russian Ginseng roots (see **Table 20**).

CONCLUSIONS

Although a legal basis for regulating hunting and trapping for fur exists in the Russian Federation, it includes the following principal shortcomings:

- Obsolete hunting legislation, which dates back to the Soviet period, and in some cases, contradicts current legislation of the Russian Federation;
- Inadequacy of the existing licensing system and inefficiency of control over the fur harvest by specialised governmental bodies, including over regulation of fur supplies to auctions (at the moment a large portion of these furs are harvested illegally, without licences and/or in excess of fixed limits);
- No long-term assignment of hunting grounds to individuals and indigenous communities; and
- Non-implementation of the *Agreement on International Standards for the Humane Trapping of Wild Animals*. This lack of compliance with an international agreement may have negative effects on the exports of furs if importing countries decide to impose trade sanctions or if public awareness campaigns launched in these countries turn consumers against Russian fur.

Data on population dynamics of fur-bearing animals are scarce and insufficient. Analysis of those of the key fur-bearing species (Sable, Red Squirrel, Eurasian Otter, Ermine, Raccoon Dog, Mountain Hare, Siberian Weasel, Red Fox and Eurasian Lynx) from 1982 to 2002 does not show any significant declines in the numbers of animals. During this period, Sable and Red Squirrel were the most-hunted species. Based on official hunting statistics and taking into account estimated levels of unreported harvest, the current levels of Sable hunting seem to be sustainable, however, there has been a clear increase in hunting and trade levels since 2000. Hunters reported localized sable population declines around settlements only, a result of the limited accessibility of remote hunting grounds after the economic crisis.

A number of economic factors contributed to the decreased amount of fur-bearing animals harvested in the southern part of the Russian Far East and across the Russian Federation as a whole between 1992 and 1995. These factors include: the elimination of the State monopoly on fur, which led to the collapse of the centrally-organised fur harvest and of the central supply and trade system; the general economic crisis; and the changes in market demand, including fashion. Until the mid-1980s the USSR was recognised as the world's largest supplier of high quality fur. The annual value of fur offered at auctions in the former USSR reached USD150 million. However, after the break-up of the USSR, the annual value had dropped by almost 75% to USD34.6 million in 1992 and further to USD14.3 million in 2001. After 2000, the volume of fur harvested has been steadily increasing and has reached levels equivalent to those of the 1980s. However, the market value of the skins sold has significantly decreased. For instance, in 2002, the price of Sable skins sold at auctions in the Russian Federation (USD51) was only 30% of its commercial value in 1987 (USD181).

Among the 18 species most common in the Russian fur trade, Sable has the highest value fur and accounts for 50 to 60% of the market. The overall value of Sable skins sold at the St Petersburg auction in 2003 was USD15.3 million (272 498 skins sold at an average price of USD56 per skin). Red Squirrel skins are also important (around 20% of the market) and have been in stable demand in recent years. However, the value of Red Squirrel skins is much lower than that of Sable skins and prices offered at auctions average USD2 per skin. Almost 570 000 Red Squirrel skins were sold at the St Petersburg auction in 2002, for around USD1.1 million.

A comparison between official harvest data and number of skins offered at the St Petersburg auction indicates that, in most years, the number of skins offer at the auction exceeded the official harvest quota - by as much as 191% in some years (for example in 1998). Thus, based on this comparison between records of furs offered at the St Petersburg auction and annual hunting quotas, there seems to be a substantial illegal harvest of fur-bearing mammals and the St Petersburg auction is supplied not only with legally harvested furs, but also with illegally harvested furs not been recorded in any official statistics, i.e. fur from animals hunted in excess of official quotas.

In the early 2000s, the rising demand for furs from Chinese traders facilitated the maintenance or even the increase of fur supplies. However, the Chinese wholesale market is for inexpensive furs. These skins are not exclusively destined for the Chinese market because an unknown portion of the skins imported into China are processed and re-exported, including back to the Russian Federation. Market surveys undertaken in Vladivostok between 2002 and 2003 revealed that almost 80% of the fur products on offer had been imported.

Hunting and trapping for fur remains a strong tradition and continues to play an important role in supporting the livelihoods of local communities in the Russian Far East. However, current prices for furs and the general cost of living, together with transport and other hunting-related expenses, have made hunting and trapping for fur unprofitable as a single source of income for professional hunters. The purchasing power derived from a Sable skin in the first years of the 21st century was only a third of what it was in the 1980s. Therefore, nowadays hunters must harvest more furs than they did to compensate for the loss in income. Many hunters also depend on the use of other wildlife products such as non-timber products as an additional source of income. In addition to this, some hunters and trappers said they had also started to target higher value wildlife products, including rare or protected species, in order to earn additional income.

Because various elements have influenced the livelihoods of hunters in the Russian Far East, it is difficult to judge to what extent the changes in the fur trade contributed to an increased exploitation of endangered species. Moreover, there are various different factors that have led to an increased exploitation of wildlife species in the Russian Far East. Soon after 1992, after the borders to neighbouring countries were opened, foreign trade developed and governmental border controls were weakened. At the same time, demand for plant and animal species from the Russian Far East for traditional medicine in neighbouring countries increased. Prices for these species were often higher than those of the species traditionally hunted and trapped for fur. Because of the changes in hunters' lives and incomes, some hunters started to hunt also for more "profitable" species and products. Some traditional "fur hunters", who were no longer able to rely on their previous income from furs, began illegally hunting protected species, for personal consumption as well as trade. The situation was exacerbated by the fact that most products harvested for the oriental medicine market can be harvested either while hunting and trapping for fur-bearing animals (for example, musk deer pod and bear galls) or after the season for the same has closed, as in the case of ginseng.

In general, fur hunting is of negligible importance for the economy of the southern regions of the Russian Far East since it represented at most 0.1% of the regional budget's revenues during the period studied (1982 to 2001). A small part of the population is involved in commercial fur hunting. Even in 1991, when commercial hunting was still highly profitable and hunters were well paid for their work, only 3500 hunters (0.25% of the total population) were officially recorded as professional fur hunters in Khabarovskiy Kray. On the other hand, it is important to keep in mind that most hunters live in rural areas and many are members of traditional indigenous communities. In the Russian Far East, where unemployment is particularly problematic in smaller villages, hunting for fur is important for maintaining winter employment in the least economically developed rural areas and is a substantial part of people's income. According to interviews with professional hunters, they are still dependent on hunting and trapping for fur in order to make up their income. In addition, more than 70% of middle-aged men of indigenous communities hunt and trap for fur. For these communities, hunting for fur is not only a type of traditional and sustainable nature management, it is also their basic source of living. Thus, the social and economic importance of hunting significantly increased in the 1990s and continues to play an important role in maintaining social stability in the region today.

RECOMMENDATIONS

The report demonstrates that there have been numerous political and economic factors that have influenced the livelihoods of traditional hunters in the Russian Far East since the break-up of the USSR. In the late 20th century, the fur trade in the Russian Far East has undergone some dramatic changes that have impacted the livelihoods of many hunting communities in the region. While some of the findings of the report suggest that hunting for fur remains a strong tradition and continues to play an important role in supporting the livelihoods of local communities in the Russian Far East, they also document certain shortcomings in the current management of the harvest of and trade in fur. The opening of the borders in the early 1990s facilitated trade between the Russian Far East and other East Asian destinations, such as Japan and China, where the rising economy has stimulated the demand for certain animals and plants, particularly those used in traditional medicine. This in turn has led to an increased exploitation of protected species in the Russian Far East. Although it is difficult to evaluate to what extent changes in the fur industry and markets have led to an increased exploitation of wild fauna and flora in the region, these factors must be taken into account because they played a major role in the region's economical transition and consequently impacted hunters' behaviour. Therefore, the following recommendations also aim to improve the regulation and management of hunting for and trade in fur in the Russian Far East in order to ensure their ecological and economical sustainability and thereby reduce hunters' pressure on wildlife that is protected and threatened.

Directed to governmental bodies in the Russian Federation and neighbouring contries

To address scientific aspects of the game hunting and trapping for fur

- Organise population monitoring for species that are hunted for their fur in order to have readily available data that are necessary to identify and properly address potential declines in population as a result of over-harvesting and take the adequate precautionary measures, such as setting size, seasonal and hunting grounds limits.
- Conduct a census of Sable populations throughout the Russian Federation using modern and improved methods, with joint participation by the All-Russia Institute of Game Management and Fur Farming and the *Tzentrokhotkontrol* State Department. This will provide necessary baseline information for establishing more justifiable allocation of hunting quotas.

To address legislative aspects of game hunting and trade in fur

- Develop a legislative framework that will facilitate the long-term assignment of hunting grounds to individual hunters and hunters' associations that do not represent legal entities.
- Urgently ratify the *Agreement on International Humane Trapping Standards*.
- Assess the feasibility of establishing a centralised auction marketing system for the sale of furs legally harvested in the Russian Far East.
- Offer a range of official economic incentives that encourage hunters to supply and traders, including exporters and importers (e.g. in China), to sell and purchase legally harvested furs at auctions under such a system.

To address management and control aspects of game hunting and trade in fur

- Introduce compulsory skin marking with non-removable numerical labels that will be given to hunters together with their licence. The Russian Federation could also examine lessons learned from measures taken in Canada and the USA where systems of labels linked to licenses exist. The marking of skins will help to improve efficiency in controlling the hunters' compliance with harvest levels.
- Undertake the necessary research to develop alternative trapping methods for hunters, particularly those from indigenous communities, and promote the urgent replacement of leghold traps, which are prohibited by the *Agreement on International Humane Trapping Standards*.

- Strictly control the number of furs entering international fur auctions and enforce existing hunting regulations (i.e. prevent animals hunted in excess of quotas from entering the legal marketing and trading system).

To address the illegal harvest and trade in protected wildlife

- Adopt administrative measures, in the Russian Federation and neighbouring countries, that formalise cross-border collaboration and co-operation among enforcement authorities responsible for the control of wildlife trade regulations through the development of tools for the exchange of information and data, facilitate staff visits, exchanges and regular meetings to discuss common enforcement challenges.
- Allocate the necessary budgetary resources to the implementation and enforcement of existing legislation for the protection of 'rare' species (such as tigers, leopards, ginseng, etc.) and the regulation and management of hunting species (such as musk deer and bears). The consolidation of specialised anti-poaching units in key-problem areas is recommended.
- Provide better training, resources and equipment to enforcement personnel responsible for the control of wildlife protection, hunting and wildlife trade regulations.
- Raise the fines for poaching and illegal harvest of wildlife in the Russian Federation to ensure that they can act as effective deterrent. A fine of the equivalent of up to 50% above the market value of any seized wildlife is recommended.
- Strengthen the role of the judiciary in applying adequate penalties against violations of wildlife and hunting regulations to ensure that sanctions dissuade poachers or smugglers to reiterate their crime.

To promote alternative income generating activities

- Assess the possibility of developing alternative income generating activities with rural communities, including the promotion of the sustainable use of non-timber forest products harvested in the Russian Far East as an additional source of income for rural communities.
- Explore the opportunities of marketing channels for such products, both non-fur and non-timber forest, in the Russian Far East and, where possible, abroad, to increase their commercial value and the income they generate.

Directed to fur trade and marketing companies in the Russian Federation and in the main importing countries

- Actively contribute to setting up and participating in the obligatory marking of furs.
- Participate in and contribute to legal and administrative efforts to improve the marketing or legally harvested fur (e.g. the establishment of centralised auction system) and thereby help to maintain an optimal balance between demand, supply and prices for furs, particularly on the international market (e.g. prevent that hunters are offered minimum prices for their furs; when the demand is stable, avoid the appearance of an exceeding offer of furs, leading to a drop of the retail value).

Directed to NGOs and other relevant institutions and stakeholders in the Russian Federation and in the main importing countries

- Stimulate decision-makers to act upon the above recommendations, including the need for reliable official data on populations and levels of hunting and trade, and for related enforcement measures, and where possible provide the required funds and/or technical expertise to support such activities.
- Pursue the gathering, analysis and promotion of additional information on the potential role of valuable wildlife products in preventing the exploitation of threatened species in the Russian Far East.
- Facilitate the dialogue among decision-makers, including commercial stakeholders, in the Russian Federation and in China to assess the risks and benefits and most appropriate ways to improve the marketing of legally acquired wildlife products, for example through the establishment of a well-controlled auction marketing system.

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ANNEX 1

Questionnaire

1. Why are you hunting?
a) Hobby
b) Profession
c) Basic source of income
d) Other (please specify)_____

2. How many years have you been hunting?_____
Including fur hunting_____

3. What is the share of hunters and commercial fur hunters in the population?

	Hunting for ungulates	Fur hunting
Virtually all adult people	1	1
Most of the adult people	2	2
About 50 % of all adult people	3	3
Less than 50 % of all adult people	4	4
A few persons	5	5
Uncertain answer	6	6

Other (please specify)_____

4. How much time do you devote to the hunting for fur during the hunting season?
a) The whole hunting season.
b) Vacation period
c) Two to three weeks a month over the whole season.
d) Only weekends
e) Other (specify, please)_____

5. How do you get to your hunting area? (More than one answer is possible*)*
a) Snowmobile
b) Boat and motor boat
c) Automobile
d) Helicopter
e) Other (please specify)_____

6. Did you profit from the fur harvest in the *previous* season?
a) Made high profit
b) Made profit, though not high
c) Profits were equal to expenses
d) Sustained losses
e) Uncertain answer

7. How much did you spend on preparations for the current season?
a) Less than 3000 roubles.
b) 3000 to 5000 roubles
c) 5000 to 7000 roubles
d) 7000 to 10 000 roubles
e) 10 000 roubles and more
f) Uncertain answer
g) _____

8. How would you evaluate the prospects for the profit from fur sales compared to the expenses on preparations for the hunting season?

a) Profit will be 3 times expenses
b) Profit will be 2 to 3 times expenses
c) Profit will be 1.5 times expenses
d) Profit will be equal to expenses
e) Profit will cover only half of the expenses
f) Profit will cover only one-third of the expenses
g) Uncertain answer
h) _____

9. What animal species did you harvest and what profits did you make?

	Harvested	Profits			
		High	Medium	Low	Uncertain answer
Red deer	1	1	2	3	4
Sika deer	2	1	2	3	4
Moose	3	1	2	3	4
Roe deer	4	1	2	3	4
Musk deer	5	1	2	3	4
Boar	6	1	2	3	4
Brown bear	7	1	2	3	4
Asiatic black bear	8	1	2	3	4
Lynx	9	1	2	3	4
Wolf	10	1	2	3	4
Red fox	11	1	2	3	4
Wolverine	12	1	2	3	4
Indian marten	13	1	2	3	4
Sable	14	1	2	3	4
Siberian weasel	15	1	2	3	4
Ermine	16	1	2	3	4
Squirrel	17	1	2	3	4
Musk rat	18	1	2	3	4

10. How have the numbers of the fur-bearing animals changed over the last decade?

	Numbers has increased	Numbers has not changed	Numbers has decreased	Uncertain answer
Lynx	1	2	3	4
Wolf	1	2	3	4
Red Fox	1	2	3	4
Wolverine	1	2	3	4
Indian Marten	1	2	3	4
Sable	1	2	3	4
Siberian Weasel	1	2	3	4
Ermine	1	2	3	4
Squirrel	1	2	3	4
Muskrat	1	2	3	4

11. What products did you or the members of your family harvest in the wild and what profits did you make from it?

	Harvested	Profit			
		High	Medium	Low	Uncertain answer
Ginseng	1	1	2	3	4
Magnolia vine	2	1	2	3	4
Eleutherococcus	3	1	2	3	4
Other medicinal plants	4	1	2	3	4
Berries	5	1	2	3	4
Edible plants (bear's onion, ferns, etc.)	6	1	2	3	4
Pine nuts	7	1	2	3	4

12. Which method of fur harvest gives you higher income?
a) Trapping
b) Shooting

13. Do most hunters have enough time to harvest the number of Sables specified on the licence?
a) Yes, and even to harvest extra sables
b) Yes, harvest the exact number of sables fixed in the licence
c) No, have no time to harvest them
d) Uncertain answer
e) Other (specify, please)_____

14. To whom do you usually sell the harvested furs?
a) Russian trade and procurement companies_____%
b) Russian individual procurement agents_____%
c) Foreign residents _____%
d) Occasional customers _____%
e) Other_____%

15. Is it difficult for you to sell the furs?
a) No
b) Yes. Which ones? _____

16. Has the standard of living of your family changed over the last 15 years?
a) It has improved
b) It has deteriorated
c) It has not changed
d) Uncertain answer

17. If the standard of living of your family changed, what are the reasons for these changes?
_____
_____

18. What share of the family budget was made up by the profits gained from the use of the taiga resources (hunting, furs and gathering of wild plant products)?

	Share of the family budget					None
	Most of the budget	More than a half	Approximately a half	Less than a half	The share was negligible	
Hunting	1	2	3	4	5	6
Fur hunting	1	2	3	4	5	6
Gathering of the wild plant products	1	2	3	4	5	6

19. The average share of each kind of harvest in the total profit was:
a) Hunting for ungulates_____%
b) Fur hunting _____%
c) Gathering of the wild plant products _____%

20. Has the share of furs in the total sum of your profits changed over the last decade?
a) Yes, it has increased
b) Yes, it has decreased
c) No, it has not changed
d) _____

21. Based on your experience, what modification can you suggest for management of fur harvest and the hunting industry in general?

_____

About yourself

23. What is you age?_____

24. Family status
a) Unmarried
b) Married
c) Divorcee
d) Widower

25. Do you have children?
a) Yes (How many, note their age) _____
b) No

26. Education
a) Uncompleted secondary
b) Secondary
c) Technical secondary
d) Uncompleted higher
e) Higher

27. What is your profession?
a) Employed in conservation/environmental organization
b) Employed in other business
c) Self-employed
d) Unemployed
e) Student
f) Retired
g) _____

28. **How do you estimate your income?**
a) High
b) Above the average
c) Average
d) Sub average
e) Low

29. What is your ethnic group?
a) Far-Eastern indigenous tribe (Udehe, Nanai, Oroch, etc.)
b) Eastern Slavic nationalities (Russian, Ukrainia, etc.)
c) East Asian ethnic group (Korean, Chinese, etc.)
d) Other ethnic group_____

30. Town/village_____

ANNEX 2

List of the 19 animal species listed in Annex I of the *Agreement on International Humane Trapping Standards* (AIHTS)

Coyote *Canis latrans*
Wolf *Canis lupus*
Eurasian Beaver *Castor fiber*
American Beaver *Castor canadensis*
Bobcat *Felix rufus*
Eurasian Eurasian Otter *Lutra lutra*
River Otter *Lutra canadensis*
Eurasian Lynx *Lynx lynx*
Canadian Lynx *Lynx canadensis*
Marten *Martes americana*
Pine Marten *Martes martes*
Fischer *Martes pennanti*
Sable *Martes zibellina*
Eurasian Badger *Meles meles*
Ermine *Mustela erminea*
Raccoon Dog *Nyctereutes procyonoides*
Muskrat *Ondata zibethicus*
Raccoon *Procyon lotor*
American Badger *Taxidea taxus*

TRAFFIC, the wildlife trade monitoring network, works to ensure that trade in wild plants and animals is not a threat to the conservation of nature. It has offices covering most parts of the world and works in close co-operation with the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

For further information contact:

The Executive Director
TRAFFIC International
219a Huntingdon Road Cambridge CB3 0DL UK
Telephone: (44) 1223 277427
Fax: (44) 1223 277237
Email: traffic@trafficint.org

The Director
TRAFFIC Europe
Boulevard Jacqmain 90 B-1000 Brussels Belgium
Telephone: (32) 2 343 8258
Fax: (32) 343 2565
Email: traffic@traffic-europe.com

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