



**INSROP WORKING PAPER
NO 18 - 1995, IV.4.1**

**Northern Sea Route Social Impact Assessment:
Indigenous Peoples and Development
in the Lower Yenisei Valley**

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Title: Northern Sea Route Social Impact Assessment:
Indigenous Peoples and Development in the Lower
Yenisei Valley

Sub-programme IV: Political, Legal and Strategic Factors

Project 4.1: Social and Cultural Impact on Indigenous Peoples of Expanded Use
of the Northern Sea Route

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Date: 6 September 1995

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FOREWORD - INSROP WORKING PAPER

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INSROP is split into four main projects: 1) Natural Conditions and Ice Navigation; 2) Environmental Factors; 3) Trade and Commercial Shipping Aspects of the NSR; and 4) Political, Legal and Strategic Factors. The aim of INSROP is to build up a knowledge base adequate to provide a foundation for long-term planning and decision-making by state agencies as well as private companies etc., for purposes of promoting rational decisionmaking concerning the use of the Northern Sea Route for transit and regional development.

INSROP is a direct result of the normalization of the international situation and the Murmansk initiatives of the former Soviet Union in 1987, when the readiness of the USSR to open the NSR for international shipping was officially declared. The Murmansk Initiatives enabled the continuation, expansion and intensification of traditional collaboration between the states in the Arctic, including safety and efficiency of shipping. Russia, being the successor state to the USSR, supports the Murmansk Initiatives. The initiatives stimulated contact and cooperation between CNIIMF and FNI in 1988 and resulted in a pilot study of the NSR in 1991. In 1992 SOF entered INSROP as a third partner on an equal basis with CNIIMF and FNI.

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A Note on Terms

The text in this final revision has been changed to reflect the comments of the two reviewers for the INSROP project. In concert with other contributors to the project, all ethnonyms will be based upon the vernacular singular forms of the indigenous words. In the case of a plural, the English plural suffix 's' will be simply added. These terms will in some cases be different than the legal Russian terms which have become common in English language ethnography. I will depart from this rule in one instance: that of the Dolgans. The term 'Dolgan' is an official designator for peoples who call themselves *sakha* (*sakhalar*) [sometimes *haka* (*hakalar*)] living within the boundaries of the Taimyr Autonomous District. The use of their vernacular name would create confusion with the other Sakhas who are officially known in Russian as *Yakuty*. In statistical tables, the official Russian designators will be preserved since these are the categories which were used to gather the data.

List of Official Russian Designators, Vernacular Singular Forms, and the English Terms

Official Russian (Plural)	Singular Vernacular	English (Plural)
Evenk (Evenki)	Evenki	Evenki (Evenkis)
Nenets (Nentsy)	Nenets	Nenets (Nenets)
Enets (Entsy)	Enneche	Enneche (Enneches)
Ket (Keti)	Ket	Ket (Kets)
Sel'kup (Sel'kupy)	Shol'kup	Shol'kup (Shol'kups)
Dolgan (Dolgany)	Sakha	Dolgan (Dolgans)
Yakuts (Yakuty)	Sakha	Sakha (Sakhas)
Nganasan (Nganasany)	Ngo	Ngo (Ngos)

Introduction

The Lower Yenisei River Valley forms the central terminus for the Northern Sea Route. The ports of Dikson, Dudinka and Igarka provide havens and servicing centres for traffic rounding the Taimyr peninsula - a dramatic projection of the Asian mainland that pushes well beyond 75 degrees North Latitude. The mouth of the Yenisei, which forms a *fleuve* 40 kilometres wide, is also the source for a significant proportion of the current commercial traffic of the sea route. Russian and foreign clients receive hardwood from the mills of Igarka as well as shipments of refined nickel and copper ore from the factory city of Noril'sk. This commercial centre is remarkable for its high level of built infrastructure. Even the High Arctic port of Dikson boasts brick houses with central steam heating serviced by air strips and hospitals. The comforts of Dikson pale before the marble theatres, colleges, and the Petersburg-inspired architecture that one may find in Noril'sk. Although the short period of summer navigation makes it possible for river barges to bring grain and containers from the railway termina to the south, and daily jet flights unite Noril'sk with Moscow, this highly cultivated cluster of urban areas along the Lower Yenisei Valley relies on the Northern Sea Route for its main lines of sustenance in the form of food, commerce and even fuel.

The official figures concerning the volume of trade and level of employment tell a story about the quality of the lives of the people living in the intensively developed urban settings along the valley but give a poor representation of the lives of those people inhabiting the spaces between these centres. The well-being of the indigenous peoples of the area, small in population yet stewards of an extensive territory, is linked to the future of the Northern Sea Route in other structural ways. Often their subsistence and commercial activities are disrupted by the expanding industrial activity which realizes its profits and its growth only through the services of the sea route. More subtly, the social and economic institutions that have developed alongside the Northern Sea Route play an important role in subsidizing the villages around which these people centre their activities. The purpose of the paper is to outline the characteristics of the indigenous nations of the lower Yenisei valley and to present a picture of their structural links to the activity of the Northern Sea Route.

The research for this paper was conducted during a one and a half period of anthropological research for the University of Cambridge from September 1992 to December 1993. Eight months of this period was spent working with an Evenki reindeer herding brigade in the foothills above Igarka. Research in Noril'sk and Dudinka as well as in archives and libraries in Moscow, St.Petersburg, Krasnoiarsk, and Novosibirsk supplemented this experience. This fieldwork was funded by the Social Science and Humanities Research Council of Canada.

1.0 Geography

The territory of the Lower Yenisei Valley includes the tundra lands, forests and foothills that extend outwards from the left and right banks of the Yenisei river (Cf. Map 1.1). I include in the 'Lower Yenisei Valley' that corridor of cultural and economic activity extending inland along the Yenisei river to the North of the village Turukhansk, to the port of Dikson on the Arctic Ocean. On the right bank of the Yenisei these are the tundra portions of the Taimyr (Dolgan-Nenets) Autonomous Okrug [the Taimyr] between the ports of Dikson and Dudinka which extend inland to the headwaters of the Piasina and Kheta rivers. This treeless, industrial zone includes the territory of the Noril'sk Industrial County. South of the Taimyr, the Lower Yenisei Valley reaches the mountainous and forested sections of the Igarka Industrial County and the Northern portion of Turukhansk County along the Kureika river valley. On the left bank of the Yenisei, this region includes the tundra marshes extending south of the Gydan peninsula to the first forests starting within the embrace of the southwesternmost corner of the Taimyr and the northern portions of Turukhansk County.

The designation "Lower Yenisei Valley" is an artificial one chosen for the purposes of this report. While no point along this portion of the Yenisei river is economically or socially isolated, it is within this territory that one can identify an economic and cultural complex that has been historically and is currently affected by the Northern Sea Route. These territories are united by no other single parameter. Cultural boundaries extend significantly further to the east, west and south. Jurisdictional boundaries cleave this imagined territory along different lines. Economically, informal trade links and air routes unite villages along these points with other regions. However, beyond the boundaries that have been described, a cessation or increase in the activity of the Sea Route would have little impact.

The limits of the "Lower Yenisei Valley" do not include certain population points located within its component political districts that do have a very close link to the activity of the Northern Sea Route. The best example is the port city of Khatanga on the far Eastern portion of the Taimyr. It is also possible to include navigation centres west along the Gydan peninsula. A separate study should be conducted of the economic and cultural links that make the Khatanga - Anabar - Tiksi region a single unit.

1.1 Ecology

Other than the obvious geographical marker of the Yenisei river itself, the territory of the Lower Yenisei Valley is characterized by the transition of three ecological zones. The majority of the Taimyr peninsula is located in the tundra zone. Here one can find the short shrubs and lichen-covered hummocks that in the spring and summer support the Taimyr population of wild tundra reindeer (*Rangifer tarandus sibiricus*) and a wide variety of waterfowl which migrate yearly from as far as Africa. The permanent points of settlement, excluding

scientific outposts, are located to the south within the reach of the central Siberian taiga. Here one can distinguish two zones. At the intersection of the tundra and the taiga there is a wide area of relatively dense forests of larch and pine interspersed with large patches of tundra and marsh. This speckled distribution of differing micro-ecological areas along the treeline is an ideal haven for fur-bearers such as the Arctic fox, forest reindeer (*Rangifer tarandus Murray*), and other large mammals such as moose and bear. The majority of the traditional native settlements are located here, as is popularly said, "along the forest's edge" (*v krae lesa*). The third zone starts suddenly along the right bank of the Kureika river and to the North of the port of Igarka. Here one finds the start of the classic Siberian taiga of fir trees and cedars with luxurious fur-bearers such as the sable.

This varied biome is heavily influenced by the Pultoran alpine plateau. The plateau starts at the right bank of the Yenisei river as isolated, box-like, foothills and becomes more rugged and steep as it reaches towards the Sakha Republic. The Pultoran plateau has the ecological effect of pushing the treeline zone unusually far past the Arctic Circle creating the phenomena of "the edge of the forest". This geographical factor has made the region along the edge of the Pultoran plateau - the region corresponding the headwaters of the Piasina and Kheta rivers - a very rich and comfortable place to hunt wildlife and to raise domestic reindeer. Not only does the far northerly presence of forest and fur-bearing animals make life on the land possible, the varied terrain created by the flat-topped mountains of the Pultoran plateau allows one to change ecological zones quickly by simply changing altitude as well as moving laterally. There is a commonly encountered myth in the Russian-language literature that the Lower Yenisei Valley as harsh and uninhabitable. However, for indigenous peoples the biodiversity and variety created by the rapid succession of ecological types makes this area a very rich and secure one.

1.2 *The Human Geography of Land Use*

There are two major types of land use within the Lower Yenisei valley: extensive and intensive.

The first is that extensive system of land use of the native peoples of Taimyr. It is an old land use regime, perhaps first appearing some eight thousand years ago on the Valley - and its roots elsewhere are even older. It is an oversimplification to group all the native peoples of Taimyr under one term since their cultures, languages and attitudes towards each other are not at all uniform. However, all these groups practice a similar type of economy based on harvesting what the land gives to them for their own use or for trade. Their economies are culturally inflected with a practical technology designed to quickly produce tools, and shelter on the spot, with available materials, and also the disinclination to rely on finished goods or commodities that have to be carted about. It is useful to think of this land use strategy as *extensive* since it relies on a number of different types of environments at differing times of the year and (in contrast to the other) does not attach itself to one particular

commodity to be exploited to exhaustion. The reindeer herder, who manages a transportation system that works without petrol or machine-made parts, visits a number of different pastures often hundreds of kilometres from each other to find the best feed or best weather for the deer. Other people who live on the land prefer to fish at certain times and place traps at other times. Those that use mechanized snowmobiles or all-terrain vehicles are also aware of a number of different sites across the landscape where they can be sure the wind keeps the snow hard enough for travel or that the ice is not too thick. People who practice extensive land use know a large number of places and conditions over very great distances.

The second type of land use - intensive - is based on that industrial economy that produces the means for people to keep their immediate environment as stable and uniform as possible on the basis of the sale of a single-commodity export on world markets. Within Russia, this type of civilization appeared as early as the 17th Century in small confined areas but became common across the country only in Soviet times after the Second World War. The factories, roads, and buildings which physically represent this land use regime in the Lower Yenisei Valley were built on the backs of deported Latvians and Ukrainians, not to mention the Sakha and Dolgan sled drivers who carted supplies with their reindeer until the late 1950's. Intensive land use structures can be found in the cities of Noril'sk and Kaerkan where miners and metal workers work with bulldozers and trucks to harvest layers of copper and nickel ore refined in huge smelters. The pellets produced after smelting are shipped by railway to the port of Dudinka where a small number of people load them onto ships for export to other parts of Russia or overseas. Surrounding these primary activities (which occupy about 30% of the population) are large numbers of administrators and service staff who build and maintain dwellings, theatres, and stores. A large number of people on old-age or disability pensions (perhaps also 30% of the population) remain in the cities with their families. This land use regime is also associated with a number of cells of activity from meteorological stations and geological camps scattered throughout the mountains and tundras and connected to the centre by helicopter, as well as the energy outposts of Snezhnogorsk, Svetlogorsk, and Mesoiansk connected to Noril'sk through long energy corridors of hydroelectric transmission lines and gas pipelines. Most people do not habitually use more than a few square kilometres of space around their immediate dwellings (if one excludes the paid vacation leave to resorts on the Black Sea). It is useful to think of this life-style as *intensive* since it is centred on a number of stationary and dense population points that are economically and culturally organized to exploit very small territories (and indeed horizons of metal ore under these territories) and tend to classify the enormous distances between its out-posts as either barren or as raw material for further expansion.

The intensive land use system can also be distinguished by its unique knowledge system. Instead of using knowledge to adapt flexibly to a number of different environments and to process goods for use from materials

found on the spot, this knowledge orients itself towards trade for materials to build dwellings, tools, and entertainments that can shelter its citizens from the inconveniences of having to remain for many decades on a single, frigid, windswept location. Aside from producing a large number of non-portable things, it is also not a knowledge that every individual can carry around in his or her head - it requires a large division of labour and many years of training. In order to support a large number of people, much energy both natural (especially nuclear and petro-chemical) and human is expended on linking these isolated points on the map with all parts of the globe in order to feed, cloth, and house its citizens with materials not found within the Valley. Overall, it is a type of knowledge that is not flexible. A successful miner or manager follows strict performance criteria in a predictable fashion. Sudden changes in the environment, such as the severe freeze of 1976 which burst the gas pipeline, or the current depressed world prices for nickel, cause distress and social dislocation. Perhaps most characteristic, its social organization is regulated in time horizons of not longer than five years creating a psychology of impermanency that allow the formulation economic and ecological decisions that endanger the system's reproduction. The citizens of Noril'sk suffer from that city's own pollution. The residents from all of the outposts suffer from short-term political decisions such as the flooding of the metal markets at the start of the 1990's.

The number of people subsisting under the umbrella of extensive civilization in the Lower Yenisei Valley are about six hundred thousand. This seems to be a large number, but most were born in cities and villages all over the former Soviet Union and intend to return there. There are a few fourth generation residents of Noril'sk, but they number in the hundreds.

On the map of the Lower Yenisei Valley, the intensive and extensive types of land use are best distinguished by their associated population points (Map 1.1, Table 1.1). The intensive settlements are those resource outposts that excavate and process minerals for export to what is popularly called the "mainland" (*matyrik*). They are surrounded by their resource satellites such as the camps along the Mesoiansko-Noril'sk gas pipeline or the hydroelectric cities of Svetlogorsk and Snezhnogorsk. The intensive settlements serve as portholes for production to the mainland and for the receipt of goods from the mainland. They are generally very well built with the services, architecture, and entertainments of cities elsewhere. As the popular geographic terminology suggests -they exist like islands earning their value and identity by their negotiated relationship to the mainland and not as living communities in their own right. It is the intensive settlements which are connected directly to the Northern Sea Route. Other than their very well-established working relationships with economic activities "outside" they exist as isolated settlements with little contact with the natural environment encircling them.

The extensive settlements are those points on the map which serve as the administrative headquarters for state farms. On the map they seem to be lonely population points since they are rarely connected with the intensive networks of shipping, ice-roads, or electric transmission lines like the larger cities. It is instructive to think of them as "points" since in association with these settlements there are dozens of small groups of people who move in orbit around them utilizing the natural resources of the land. Within the extensive settlements a sizable number of people - perhaps as many as two thirds of their population - do not follow a semi-nomadic existence but nevertheless are fed and supported by those who do. While these population points appear separate and isolated, if one were to produce a map recording the instances of human interaction with the land they would appear as centres of large extensive networks that would encompass most of the spaces between the isolated urban cities.

The vast majority of native peoples live in extensive settlements and maintain a direct or indirect connection to subsistence activities on the land. The distribution of native communities is not random but is produced by the association of communities with major overland historical trading routes (Map 1.2). The Yenisei river itself provides a major transport artery. The treeline along the edge of the Pultoran plateau establishes a wide range of possibilities for economic activity but is also historically a major overland transport artery into Eastern Siberia. Those communities located within the embrace of the Pultoran mountains are also placed along routes of easy overland travel by means of the distinctively long lake filled valleys of the region. The left bank communities similarly provide convenient staging points for overland travel to the Ob' river system. While these transportation arteries are mainly historic, in the rare instances when ice-roads are built or tractor-trains assembled, these remain the preferred routes. If the accessibility of air freight services were to disappear, these overland transport routes would reappear in contemporary activity.

This historical account of the distribution of native villages however does not explain the nature of contemporary land use in the area. Since 1960's intensive industrial activity has created a number of new physical features which affect the extensive use of land as fundamentally as the natural environment. Most directly related to the activity of the Northern Sea Route are the continuously open seaways at the mouth of the Yenisei river which have formed a new, natural boundary between the left and right banks. This continuously open waterway is blamed for stopping the migratory crossings of groups of wild reindeer from the right to left banks. Indirectly related to the Sea Route are the massive physical changes induced by the Noril'sk Alpine Metallurgical Factory. In conjunction with this major smelting enterprise one can associate the natural gas pipeline from the left bank interior to the city of Noril'sk, the two hydroelectric reservoirs, and the rings of heavy metal and sulphur dioxide pollution coming from the plant (Map 1.2). The obstructions of the pipeline

and two reservoirs have changed the mobility of people and of the wild and domestic animals that they manage. The effects of the expanding rings of air pollution from Noril'sk have in turn made large portions of land unusable for hunting or herding.

The effects of industrial development are complex and could be best explained by giving the history of subsistence production in each micro-region. This is a task more detailed than this overview can provide. In general terms, the changes on human geography by industry might be seen as an expanding ring that leaves the land barren of human activity within its compass. The results of pollution and obstructions have forced native hunters and herders (as well as Russian hunters) to search out new lands along the peripheries of their former territories. Thus, since the 1960's, one can sketch out a change from a network of small, evenly-spaced communities arranged along traditional transportation routes to a pattern of peripheral villages serving as centres for semi-nomadic hunting and trapping.

Among the unique problems created by this expanding ring are the growing dependence of aboriginal communities on transfer payments and subsidies and the problem of a land shortage. As subsistence activity is forced to relocate along the ever receding edge of the ring, the costs of bringing meat, fish, and furs become increasingly high. As will be discussed in the next section, this process of displacement has the paradoxical effect of removing producers from the lands in the immediate vicinity of industrial sites but placing them in an economic and jurisdictional dependence on the civil institutions associated with the Northern Sea Route. The expansion of producers into new lands also creates problems of space since displaced producers encounter other displaced hunters along the peripheries of their territories. The problem of a land shortage is becoming exacerbated by the new politics of land privatization which forces people to establish private land title in areas where considerable overlap of activity is occurring.

There is an additional social problem created by the expanding reach of intensive settlements over the rural areas of Taimyr. There is considerable evidence that the depopulation of the tundras and taigas associated with resettlements and the expanding ring of pollution from the extensive settlements has disrupted the population dynamics and migration routes of the Taimyr population of wild reindeer. This population, which has now reached a population of 700,000, has since the late 1960's behaved chaotically by over-wintering in unpredictable new areas. Over the past ten years the former North to South migration route has changed in a West to East direction. Biologists feel that the chaotic movement to the deer is a learned response to increased pollution and intensive, organized hunts of the herd with automatic weapons in order produce fresh meat for the intensive settlements. While the exploding population of deer and their chaotic migration routes are a biological mystery, it has become a serious social problem. Those communities closest to the urban centres of Noril'sk, have lost

their domestic herds of reindeer due to the unpredictable movements of the wild herd (which steals away the domestic deer during the fall breeding season). Year by year there are reports of the loss of deer extending further and further along the Khatanga river valley. Within the Lower Yenisei Valley, domestic reindeer herding survives only across the left bank of the Yenisei (where the wild herd can no longer cross) and in the right bank communities of Potapovo and Khantaiskoe Ozero. The latent impact of this ecological problem are serious for as social welfare payments become limited in this time of austerity, the capacity for local aboriginal hunters to subsist on meat from the land is also limited due to the lack of reindeer for transport or predictable points at which to hunt the wild deer.

1.3 Political Geography

In a state that possesses a highly structured redistributive economy, the boundaries of administrative units are a very important fact of the geography. Although the current policy of privatization may dilute the powers of these administrative units, they will remain the main political actors in the planning and construction of settlements and transportation corridors. It is through the agency of administrative units that the income associated with the Northern Sea route is channelled in the form of services to the benefit of aboriginal peoples. It assessing the impact of these institutions on native peoples is important to distinguish between regional units and local units.

The territory of the Lower Yenisei Valley is divided into four regional administrative units which mark the limits of the redistributive authority of regional governments. The main regional authority is that of the Taimyr Autonomous *okrug* in which the ports of Dudinka and Dikson are located and the majority of the aboriginal extensive settlements. Within the Taimyr, the mining city of Noril'sk is set within an independent jurisdictional unit known as the Noril'sk Industrial County. South of the Taimyr, along the Kureika river, is the territory of Turukhansk County. Extending up from the port city of Igarka into the foothills and forests of the right bank of Yenisei is a second independent jurisdictional unit known as the Igarka Industrial County.

These administrative units do not reflect pre-existing cultural or historic boundaries but instead the convenience or whims of regional administrators. The majority of the population in the Taimyr (Dolgano-Nenets) Autonomous *okrug* is immigrant European (despite the name of the unit). Of the native groups which form the majority in the rural areas of the Taimyr, there are two who are encapsulated by these regional boundaries: the Enneches and the Ngos. All others have political and cultural links outside of these territories. The Evenkis are associated with territories that straddle the boundaries of all regional units. The Dolgans share kinship and trade links with the Sakhas living within the Evenki Autonomous Okrug in the Sakha Republic. The Taimyr Nenets are linked to other Nenets groups in the territory of Tiumen Province. Since the 1960's,

these extra-territorial cultural ties have become increasingly limited. These ties, actively expressed today in stories and mutely in dialectal differences, represent the former history of exchange of marriage partners, reindeer, and manufactured goods. The contemporary corridors of inter-regional trade and social interaction to a great degree flow within the new boundaries of regional units and their component local units.

Somewhat unique to the Lower Yenisei Valley, in comparison to other parts of Siberia, is a variety of local administrative units. Here, as elsewhere, there are *raion* [county] governments which form an intermediary redistributive unit between regional units and the local village authorities. However in addition to the counties there is the federated city council government (*gorsovet*) of Dudinka which includes a large rural area and several villages. The independent industrial counties surrounding Noril'sk and Igarka are a third type of administrative unit. While all of these local administrative units in some form redistribute income or regulate activity associated with the activities of the Northern Sea Route, they all work subservient to *different* federal and provincial bureaucracies.

Within that portion of the Taimyr that concerns this report there are two counties, one industrialized county, and one city council government (Table 1.1). The vast, sparsely inhabited, High Arctic tundras within the Dikson county can practically be excluded from the analysis.¹ Ust'-Yenisei county administers the tundra areas down river from the city of Dudinka encompassing five native settlements. It is a primary actor in the relationship between the state and the Nenets and Dolgan fishermen, reindeer herders, and hunters. The city council government of Dudinka administers five native settlements in addition to the city itself and the Mesoiansk pipeline station. It channels services to Dolgan, Ngo, Enneche, Nenets and Evenki citizens. This single county government and city council government are the primary administrators of the aboriginal population in the Lower Yenisei Valley. Both local administrative units are subservient to the regional *okrug* government in Dudinka. The regional government in Dudinka is formally subservient to the provincial government in Krasnoiar'sk. The Noril'sk Industrial County is the local administrative unit tending to the urban, immigrant populations within its city as well as the energy outposts of Snezhnogorsk and Svetol'gorsk located outside of its boundaries. Since 1954, the city of Noril'sk was declared a "City of Provincial Subservience" (*kraevoi podchelenie*) and thus answers to the administrators in Krasnoiar'sk and not Dudinka (despite the fact that Noril'sk is geographically encapsulated by the Taimyr).

This complex jurisdictional picture is the process of change. In 1992 and 1993, although the *okrug* government in Dudinka was formally subservient to Krasnoiar'sk, it in practice preferred to negotiate directly

¹ Although there are hunters working along the banks of the Yenisei around Dikson and undoubtedly Ngo and Dolgan hunters that cross the boundaries into the district occasionally, this district primarily administers the port city of Dikson and the navigational settlement surrounding it.

with Moscow for its budget. In 1992 it declared its intent to separate from the patronage of Krasnoyarsk and become an equal member of the Russian Federation. The Noril'sk Industrial County had been jurisdictionally subservient to Krasnoyarsk for its civil services (such as health and education) but subservient to Moscow for the budgets and control of its economic enterprises. In 1993 it joined the administrative composition of the Taimyr for civil services and declared its intent to sever the economic control of Moscow over its factories.

The remaining counties and city council government administer a small fraction of the aboriginal population. This fraction must be mentioned since they are culturally linked to the Taimyr aboriginal people but are often overlooked when writing of the politics of the region. The Evenki and Ket population in the Northern portion of Turukhansk county occasionally overlap in land use with the Enneches, Nenets, and Evenkis of the Taimyr. Turukhansk county is subservient to the provincial government in Krasnoyarsk. The Igarka city council government hosts a small number of Evenkis who may share territory with the Taimyr Evenkis. The rural areas of the Igarka city council government are in practice used by the state farm "Khantaiskii" in Taimyr which employs Evenkis born in Igarka. This city council government is subservient to Krasnoyarsk.

Before the dissolution of the Soviet Union, the inconveniences created by inappropriately drawn boundaries were arbitrated by the jurisdictionally superior state trading organizations, state transport agencies, and state economic ventures. It would be commonplace for Evenkis in Turukhansk county, in Taimyr, and in the Igarka city council government to fish for one fish factory, or to receive their store-bought goods from one retail agency. In another example of cross-jurisdictional co-operation, the agencies responsible for the procurement of food in the Noril'sk Industrial County would purchase fish and meat from the villages in the Igarka city council government and in the Taimyr. Much of this co-operation was governed by administrators in Krasnoyarsk.

With the crumbling of the constitutional system of Soviet times, the institutional picture of the Lower Yenisei Valley has become unclear and sensitive to the political ambitions of each region. The Taimyr, although part of Krasnoyarsk Province, chose to symbolically express its distance from Krasnoyarsk by not participating in the governmental elections of 1993. In 1993 the provincial-wide retail trade organization which operated an office in Dudinka was liquidated in favour of a unified trading network with the Noril'sk Industrial County. The Noril'sk Industrial County, economically the metropole in the region, has practically 'joined' the geographically larger Taimyr but exercises a dominant position due to its financial power. Although Noril'sk too prefers to ignore the administrators in Krasnoyarsk, it is still legally required to pay taxes to this distant provincial city. The relationship of Noril'sk to Moscow has become unclear because of the privatization of assets in the Noril'sk Alpine Metallurgical Plant and in subsidiary industries connected with the production of metals. Further field research is required to clarify this evolving and complicated picture.

If one were to predict future tendencies, one could foresee the formation in the near future of a 'city-state' surrounding the economic activities in Noril'sk and the surrounding port-cities of the Northern Sea Route. The tradition of intra-jurisdictional trading which evolving during Soviet times might become legally ratified into a direct economic relationship between the aboriginal extensive settlements and the Noril'sk plant. Dudinka may remain the seat of civil power but it would be dependent on the economic well-being and transfer payments from the Noril'sk plant. The Plant, being the hegemonic entity in the region, would no doubt feel itself to be in an economically superior position if it were free of regulation from Moscow and Krasnoyarsk. In exchange for freedom of movement, it would be prepared to assume responsibility for the economic well-being of the outlying native areas. This hypothetically new jurisdictional contract would be very similar to that existing during the state-controlled Soviet system - only it would represent a replica modelled after a much larger, integrated whole.

Whether or not the hegemonic ambitions of the factory would become legally ratified, field research in 1993 already revealed the bifurcation of living conditions within the Lower Yenisei Valley. Although the economic lifeline of all four regional administrative units is the Northern Sea Route, the successful attempts at independence in Noril'sk and Dudinka made living easier for both urban residents and aboriginal peoples. Subsidized prices on retail goods, which have been sustained within this economic zone, were one third lower than those in Igarka or in Turukhansk county. The supply of goods within the territory of the Dudinka city council was reputed to be much better. In 1993 intra-regional trading organizations such as the Igarka fish packing plant or the Noril'sk fish packing plant began to consolidate their operations. The Noril'sk plant took over the former's territory as the Igarka plant went into a serious financial crisis. The Noril'sk plant also took over the geological survey organization in Igarka as a sub-department of its own planning and exploration division.

Again, on a hypothetical note, it is possible to envision the villages of Sovetskaia Rechka, Makovskoe, Munduskkoe, and Serkovo existing in an almost pure subsistence economy while the extensive villages within Taimyr will continue to maintain a complex division of labour with Noril'sk.

2.0 Ethnology

The Lower Yenisei Valley hosts a very complex ethnographic mosaic. If one excludes the intensive urban settlements, where there are reputed to be workers of over one hundred nationalities, there are in the rural areas eight main aboriginal nations corresponding to four language families.

Nationality in Siberia is an ascriptive phenomena. The national label is chosen by an individual at adulthood from a list of officially recognised groups - a list which has important implications for federal social

welfare payments and affirmative action programmes.² The fact that an individual may favour an aboriginal identity over a Russian identity and vice versa depending on the advantages of central state subsidies accruing to the identities on this list. The Russian state maintains its official list of northern minorities at the recommendation of ethnographers at the Institute of Ethnography in Moscow. In general Soviet and Russian ethnographers have published many nuanced studies on how specific dialect and clan groups belong to particular registered nationalities. The nuances of these ethnographies, however, are not always reflected in official statistics. Thus, if the statistics of an area are consulted over a long period of time, one can stumble across the appearance and disappearance of groups of people according to the range of choices that statisticians and ethnographers offer the people (Table 2.1). Specifically in the Lower Yenisei Valley one discovers that up until the 1960's the contemporary Dolgan and some Evenkis were recorded as "Sakha" and that until 1966 the Enneches and Ngo were invisible in official statistics. While it is not important for this report to explain all the subtleties of this issue, one must bear in mind that in an accounting system where a person must choose only *one* identity for himself or herself from an official list some of the real complexity of national identities can be hidden.

By far the most numerous aboriginal ethnic group in the area are the Nenets. Traditionally, the Nenets are tundra reindeer herders occupying a vast expanse of land from the mouth of the Yenisei River to Mezen' River in the European part of Russia. The Nenets of the Lower Yenisei Valley are but a sub-group of a nation numbering over 35,000 in regions abutting the Northern Sea Route. Their language is a Samoyedic one. Although it is said that all Nenets are able to understand one another, there are strong dialectical differences even within the Lower Yenisei Valley not to speak of the wide territory that this group occupies. Nenets families to a great degree use their language in day to day life. They are conspicuous within the regional capital of Dudinka by their speech. The local newspaper and radio broadcast in their language. In terms of economy, their large herds of reindeer enable some families to live independently of the state economy, although their herds are probably the most impacted by gas development on the left bank of the Yenisei and winter shipping traffic.

The Enneches, who live to the south in the tree line village of Potapovo and on the right bank of the Yenisei at Vorontsovo, are a closely related ethnic group to the Nenets. Until 1966 they were officially not distinguished from the Nenets. Because of a high degree of bilingualism, many Enneches speak the Nenets language although

²According to both Soviet and Russian laws, young adults upon receiving their first passport could choose their nationality between those of their parents (my thanks to Igor Krupnik for this information). For most people this seems to be the case. In isolated examples in Siberia I have encountered individuals who have chosen the nationalities other than that of their parents. In the Lower Yenisei Valley one can find the odd individual choosing 'Sakha' over 'Dolgan' (when no such nationality officially exists) and of people of mixed blood simply registering themselves as 'Russian' (when their father might be Ukrainian or Belorussian). In terms of subsidy, Dolgans are listed as a 'sparse people' hence are eligible for affirmative action subsidies. Sakhas (ie Yakuts) are a 'large' people and are thus not eligible for some subsidy programmes.

the former differs significantly in lexis and grammar. The interrelationship of the two groups has a long history since certain exogamous clans with both nations have a long tradition of intermarriage with each other. The economy of the Enneches has long been adapted to the presence of Russian traders. It is best described as a flexible economy combining fishing, hunting and reindeer herding. The reindeer herding technology of the Enneches is similar to that of their sister nation, although the herds that they keep are smaller by one order of magnitude. The Enneches have suffered very directly from the pollution of the Noril'sk plant. The Potapovo group, working in the Potapovo Research Farm, has been forced to abandon their lands on the right bank of the Yenisei due to high levels of heavy metal poisoning and acid rain (Maps 1.2 and 2.1). They are now competing for land on the left bank with the Evenkis of the Sovetskaia Rechka and the state farm "Khantaiskii" and the Nenets of the Turukhard State Farm.

Perhaps the most politically powerful and articulate of the aboriginal groups are the Dolgans. This group, with a population approaching that of the Nenets, is one of the two nations officially mentioned in the legal name of the Taimyr. In practice, many of the senior officials of the Taimyr are drawn from the ranks of the Dolgans (although many are from those Dolgan settlements in the distant Khatanga county). The Dolgan nation is officially understood to be a composite of Sakha, Evenki, Enneche, Russian, and Ngo origin. Almost any single Dolgan individual can find predecessors among these groups - although almost universally every Dolgan individual speaks both the Dolgan language and the Russian language very well (but will not know the others). The Dolgan language is very close to Sakha, which is a member of the Turkic family. The Dolgan of the Lower Yenisei Valley, as with the Ngos and Evenkis, have suffered very serious changes to their traditional lifestyle due to the loss of their domestic reindeer through the chaotic migrations of the Taimyr wild population. Unlike their neighbours, members of the Dolgan have successfully trained a high number of doctors, teachers, and other professionals, and are thus very vocal in lobbying for their rights and for the rights of other aboriginal groups. Because of the affinity between the Dolgan language and the Sakha language there continue to be strong links between the Dolgan of the Lower Yenisei Valley and the those Sakhas living in the Evenki Autonomous *okrug* and the independent Sakha republic.

The Russian order of "Tundra-peasants" is still an ethnographically distinguishable group which has settled along the major waterways of the region. In the 17th Century Russian traders settled in the area to become aboriginal hunters and trappers. For the most part they intermarried with Dolgan individuals and came to incorporate many aspects of their lifestyle including reindeer husbandry and this Turkic language. Presently, it is difficult to distinguish a "tundra-peasant" from a Dolgan unless one asks about the ethnic origin of the person.

This group has ceased to function as a self-conscious unit of identity. The Tundra-peasants are invisible in official statistics.

The Ngos are a small but fiercely distinct Samoic-speaking nation living in the villages of Ust'-Avam and Volochanka. They were one of the last groups to be collectivized and even contacted by the Soviet state. Their traditional profession as hunters of wild reindeer took them to the high tundra pastures of the interior of the Taimyr peninsula. Although contemporary Ngos have lost their herds of domestic reindeer, and suffer from a demographic crisis, they still preserve their language and support shamanistic traditions. In terms of ethnographic research, this is one of the best-documented group for it is commonly thought to be an aboriginal group of great antiquity in the region. This makes their present economic crisis a particularly great tragedy.

The Evenkis are perhaps the most widely dispersed nation across the territory of the Lower Yenisei Valley. Although their modest population is concentrated along the banks of the Yenisei river to the south of Potapovo (including Lake Khantaiskii), isolated Evenki families can be found living within Ust'-Avam, Volochanka, and Karaul. Their language is a member of the Tungus-manchurian family. In the Lower Yenisei Valley they speak the Northern dialect of this widely distributed language family. Characteristically, Evenki individuals of the older generation are multi-lingual speaking Russian as well as several other aboriginal tongues. The contemporary Evenki populations tend to be highly assimilated to the majority population around them be it Dolgan or Russian. The Evenkis of the Lower Yenisei Valley maintain extensive kinship ties throughout the Taimyr, as well as the Evenki *okrug*, the Sakha republic and Turukhansk county. The Evenkis of the region have preserved their traditional areas of land use and their traditional skills of herding or fishing, but they are becoming increasingly troubled by pollution from the Noril'sk plant.

To the South of the Evenkis along the Yenisei valley in the villages of Maduika and Goroshikha are the Kets. This small hunting and fishing group is one of the most marginal to the economy of the Lower Yenisei Valley. Their lands are being encroached upon by forest and mineral exploration interest moving south from Igarka and as well from the Kureika hydroelectric dam. The Ket language, being a unique language to Siberia, is in danger of disappearing due to the assimilative pressure of Russian and the small size of the population. It is remembered by older Evenkis that the territory of their occupation used to be greater extending well up to Sovetskaia rechka and the Kureika valley. Although individuals still live in these areas, the majority of the Ket population is to be found in Turukhansk county above Turukhansk and in the Evenki Autonomous *okrug* along the Podkamenaia Tunguska river.

3.0 Community politics

Up until this point, this report has been focusing on the overall structural trends across the Lower Yenisei Valley. This level of analysis is misleading to the extent that it gives the impression that the various institutional and collective actors are conscious of each other's actions and that politics is conducted directly. The level at which face-to-face politics is carried out, especially when referring to the indigenous peoples of the area, is in the extensive settlements. Each extensive settlement in the Lower Yenisei Valley is the focal point for the interaction of various communities. Within villages there may be one or two aboriginal groups that function as integrated communities. In most villages there are loosely knit groups of immigrant producers who often also imagine themselves as communities. These various communities continue to be united through the structure of the collectivized farm system.

3.1 The Collectivized Farm System

The network of collectivized farms that enclose the rural areas of the Lower Yenisei Valley are a relic of a rural development initiative within the Russian Federation of the late 1960's. The logic of the system was such that all productive activity occurring in the tundras and taiga was to be co-ordinated by the administration of one locally-based authority which would allocate production quotas, tools and equipment, and salaries and health benefits. The system was highly centralized and rationalized according to the criteria of efficiency necessary to the regional administrative units and the federal ministries which were responsible for the farms. To achieve rationalization many small population points were eliminated and their residents resettled into larger settlements. The systematic resettlement and grouping of aboriginal producers in the late 1960's and early 1970's marked the end of the finely dispersed pattern of settlements traditionally chosen for their access to transportation corridors or hunting or fishing resources and the beginning of the formation of the extensive settlements described above. In order to support this newly rationalized agricultural system, central fiscal subsidies were introduced on the quantity of production achieved in special fields: reindeer herding, fishing, and trapping. The effect of the agricultural reforms of this era was to bury the distinction between "subsistence" production and "market" production that is commonly found in the North American Arctic. While all aboriginal producers still eat food from the land and clothe themselves in skins from the land, these are products that were accounted for within a larger formalized system of exchange. It is important to emphasize that activities such as reindeer herding are understood and structured as professions and not as "traditional" activities. The organizational qualities and the professional profiles built within the collective farm system, and in many cases the system of subsidies, remain as important today in understanding the economy as they had been during Soviet times.

Since 1993 all state farms and collective farms were made legally independent economic entities. This legal move means that the co-ordination of production within each farm by central authorities has ended but the

structural integrity of the farms remain unchanged. In practice, each farm continues to direct production is organized and distribute money in the same manner as during Soviet times. In order to understand how aboriginal producers are remunerated it would be necessary to summarize the history of each collective - although this is out of the scope of this report.

There is one general structural feature to the newly privatized collectives that has a direct impact on the politics of the region. Unlike in the North American Arctic, services in the former Soviet Union, such as the supply of water, electricity, and heat for homes and schools was paid and supplied by each local farm. Farms, in return, received subsidies to support these very expensive services from the regional administrative units on the basis of the production that they achieved. Although various groups within farms are striving for the status of private entrepreneurs, the fact remains that they can not light their homes, heat the village school, or receive spare parts and shells without the institution of the collective farm. Thus all communities, be they Evenki reindeer herders or Russian fishermen, continue to market production through collective farm organizations even though formally these structures have legally lost their domineering role over the local economy. Although it may seem that the Northern Sea Route may only effect aboriginal producers negatively through pollution or positively through employment, the subtle constitutional fact that civic services are subsidized by enterprises means that a change in the organization of the Sea Route will impact in these areas as well.

3.2 The Regional Division of Labour

The primary products that originate from the rural areas of the Lower Yenisei Valley are fish, fur, and reindeer meat (Table 3.1). These are the same staples that were produced during the height of the collectivized farming system. There is no reason to expect that these products will lose their importance in the future. While these are the same products that were "traditionally" produced before the construction of the urban intensive settlements, it must be realized that they are not "traditionally" consumed. Rather than being the objects of subsistence production they are sold in order to feed settled populations within the villages and urban centres of the Lower Yenisei Valley.

The most valuable commodity in the decentralized economy is that of fish. Fresh fish is actively sought and processed by the Noril'sk Fish Factory for sale within its urban supermarkets for sale in fresh and in canned form. This is a popular commodity amongst the immigrant communities who primarily populate the intensive settlements. The sale of fish as a staple provides a great saving for these centres; even if one factors in the cost of flying the fish by helicopter from a number of the outlying production points. Fish is produced for the Noril'sk fish factory by the Evenki and Dolgan producers in the Khantaiskii state farm using the resources of lake Khantaiskoe and the Khantaiskoe reservoir. Nenets and Enneche fishermen along the banks of the Yenisei

working for the Potapovo experimental farm and the state farm Turukhard also provide fresh salt water and river fish. The Ngo and Dolgan fisherman of the Volochanka state farm also supply the Noril'sk fish factory but to a lesser degree.

In terms of the balance sheets of the collectivized farms, the sale of fish is the single most profitable item. In terms of money profit the activity is lucrative (earning the average fisherman up to 100,000 1993 rubles for two months work). More importantly, since the transport costs are paid for by the buyer, there is a continuous flow of transport into the villages which allow people to move between the city and the extensive settlements, and for parts and perishable food to be transported quickly and cheaply. The strong regional market in fish is a good replacement for the crumbling of the centralized retail network.

Reindeer husbandry still provides an important source of employment and food, but it has lost its lucrative position as the bread winner of collectivized farms. In Soviet times, the bulk weight of reindeer meat produced for sale for the state formed the basis on which subsidies would be distributed to settlements. The delivery price established would be unique for each collective farm in order to reflect the amount of capital that had to be transferred. Much domestic reindeer meat is still distributed through collective farms, but it is now sold in order to keep village residents with a cheap source of meat rather than to make profits. Wild reindeer meat, when it can be harvested from migrating groups of wild reindeer, is also harvested for this purpose. The function of reindeer meat economy is now approaching that of subsistence with the exception that the weapons, vehicles, and fuel used to hunt and transport reindeer meat are still provided free of charge by state farms from funds collected from the sale of fish or furs to the urban centres. It is important to realize that even activities such as hunting for food are still reliant upon some avenue of central state subsidy that ultimately is founded upon the health of industrial activity in the region.

Reindeer husbandry is most highly developed in Ust'-Yensei county where Nenets herders each keep up to ten thousand head of deer. These herds are kept in the High Arctic expanses of the Gydan peninsula in the summer and are brought south closer to the villages of Ust'-Port and Karaul in the winters. Reindeer husbandry in this area is probably the least affected by industrial pollution but the movement of herds is most affected by the gas pipeline and the traffic of the Northern Sea Route. The structure of everyday life on the Nenets brigades is the least reliant on the trade in industrial products and the services of the welfare state. It is not odd to hear stories of Nenets families with no state documents or no affiliation with collective farms who, in anticipation of chance meetings with airborne geologists keep furs and meat to trade for metal utensils and shells. The clearest threat in this area are privatization initiatives that seek to break up common pastures into individual tenure. If one ignores the potential problems with unregistered reindeer herders, the number of people to animals is so

large that there would not be enough land to allow each herder a pasture for a domestic herd numbering in its thousands.

In all other areas of the Lower Yenisei Valley the impact of industrial development upon reindeer herding has been more marked. In most of the extensive settlements in the territory of the Dudinka city council, domestic reindeer herding has been eliminated through the loss of stocks to wild herds. Within the state farms of Potapovo, Khantaiskoe Ozero, and the collective farm in Sovetskaia Rechka, the expanding land use of reindeer herders in reaction to pollution have created problems of overlapping pastures with one farm on another and with the Nenets reindeer herds. The yearly hunts of wild reindeer, which are an important branch of economy for the Ngo and Dolgan in Volochanka and Ust'-Avam are increasingly hindered by the shifting migration routes of the wild reindeer and the lack of readily available spare parts and fuel for mechanized transport.

The final area of economic activity is fur trapping. This modest but lucrative profession has been a consistent source of income in hard currency. The classic fur of the Lower Yenisei Valley is the arctic fox. Not only are the tundra foxes of great size and quality but many collective farms raise domestic silver foxes. Along the southern areas of the Valley, in the taiga areas, there are also populations of muskrat, sable, and wolverine - but in densities that do not approach those of areas in Central Siberia.

The sale of fur used to be a strictly controlled state monopoly but has long been a source of black market income even in Soviet times. The tendency in the current period is for furs to be bartered between individuals in order to secure access to fuel, shells, or transport. A bear skin or wolverine fur might be traded with a helicopter pilot in order to coax him to siphon out a portion of his petrol tank so that a hunter may be able to fuel a snowmobile or portable generator. A trapper with good connections with military or commercial pilots may arrange to have food and supplies brought to him as on aircraft enroute to perform certain mission in exchange for furs. Some furs, perhaps a third of those hunted may be traded through collective farms in order to affirm the relationship of the trapper to the director and secure another avenue to get spare parts or shells. In communities where the collective farm structure is weak, such as Sovetskaia Rechka or Ust'-Avam, individual barter in furs might be the primary strategy for obtaining retail goods.

The barter in furs that is wide-spread throughout the Lower Yenisei Valley should not be seen purely as a form of entrepreneurship. It is symptomatic of a collapse of the retail trading system. While it might be argued by some that trade should be self-supporting, it is a common perception amongst aboriginal people and administrators that it is an element of the social contract between the state and aboriginal peoples to ensure that there is a reasonably priced supply of retail goods. Thus barter in furs, while not immediately appearing to be a problem linked to the commerce generated by the Northern Sea Route, is in fact a sign that the fruits of

international commerce are not reaching rural peoples. It should be expected that in the future there will be attempts to rebuild a retail distribution system on the basis of income earned from the Northern Sea Route directly or indirectly to ensure that outlying extensive settlements are supplied with the necessities of life.

3.3 Privatization

According to official political rhetoric, the economic system of the Lower Yenisei Valley is undergoing a fundamental change due the ongoing economic reforms within the Russian Federation. Legislation passed in 1992 and 1993 has made it legally possible for producers to lease agricultural lands for lifelong private tenure. In 1994 the long-awaited privatization of state companies such as the Noril'sk Alpine Metallurgical Plant and some shipping companies of the Northern Sea Route was completed. However, living within collective farms and the tall brick buildings of the Noril'sk plant, one does not see much evidence of a real shift in the way that day-to-day life is carried out.

There are a number of important reasons that explain the paradox of the slow pace of privatization. The first and most important reason are the high costs of transport and heating in the Arctic - costs that make the state the only economic actor capable of organizing such crucial activities. The second concerns the conservatism of many regional administrators in the regional capitals who have a strong scepticism of the advantages of a privately administered economy and a great faith in the virtues of centralized institutions. Finally there are certain objective "network" problems in breaking apart centralized chains of supply and systems of land use that have created dynamics of their own.

Although all state and collective farms were dissolved officially in 1993, these institutions continue to exist as the social groupings and the legal entities which are able to provide collective goods. Within the Taimyr in 1993, all of the state farms were the primary recipients of emergency grants in order to maintain the power stations and heating plants which serviced the villages. With the exceptions of Levinskii Peski and Volochanka - where village residents sat in the dark for most of the winter of 1993 - the farms perform this traditional role admirably. The farms remain nodal points in communication and transportation to such a degree that their directors can discourage individuals from privatizing their traplines or reindeer pastures merely through the threat of withdrawing these essential services. In the Khantaiskii state farm in 1993 there were three private farmers officially noted on the map, although none of these dared to actually work outside of the authority of the farm. Without the massive investment by a private entrepreneur in retail distribution networks and communication systems (which is unlikely), these fragments of the state economy will continue to play a central role in rural life within the Lower Yenisei Valley.

The scepticism of local officials of the virtues of privatization does not stem from their provincial values but also from many years of experience of being at the centre of a redistributive economy. Their hesitancy might be interpreted as a reluctance to relinquish their power. It might also be understood as a conservative hesitancy to ensure that any new system of trade and distribution will be effective in securing the needs of the people. In discussions over privatization, the models that are favoured among the elites in Dudinka and Noril'sk are those of small regional monopolies which would continue to produce metals or provide services at the same time that they provide housing and consumer goods to their employees. Such models, which look like small-scale fragments to the previous state economy, are held as goals in negotiations over the decentralization of institutions such as the Noril'sk plant and the Northern Sea Route. Additionally, since many of the senior administrators are of aboriginal ancestry, there is a reluctance to give immigrant Russians property in land until the question of the rights of native people are clearly settled. This policy has forced many non-native trappers to leave their cabins to return to their homes in the European parts of Russia.

Finally, there are serious problems in dividing up assets into individual tenure which have been used collectively for many years. The best example is that of land. Due to the increasing circumference of the rings of pollution from the intensive settlement of Noril'sk, there is shortage of lands to be divided up. The poisoning of great expanses of pasture and traplines has clouded the issue of aboriginal land tenure. In counties like the Evenki Autonomous *okrug*, lands were given to descendants of the original clan-based extended families which managed them before the 1960's. In the Lower Yenisei Valley, the high number of village resettlements in combination with the fact that lands have been removed from production due to pollution, makes it impossible to identify old aboriginal areas. Almost all aboriginal producers have been forced by circumstance to move to new areas. The one exception is in the Nenets pastures of the left bank of the Yenisei. Here most lands are still in clan-controlled stewardship. The challenge to privatizers here is the problem of supporting such large numbers of domestic reindeer within an enclosed space. If the number of production units were to increase twenty-fold, as population figures might suggest, there would not be enough territory to divide between smaller herds without the appearance of conflict-ridden overlaps.

It is clear that the politics of privatization will continue. In the Lower Yenisei Valley, as opposed to regions in Southern Siberia, it is most likely that institutions of monopoly, corporate management will persevere in creating an economic climate very similar to that common during the Soviet period. It should be expected that aboriginal producers will retain collective institutions to manage their civic services and for negotiating access to land. It would not be unreasonable to expect the industrial firms such as those mining and exploration interests around Noril'sk to retain their concentrated, corporate form. It would also be reasonable to

expect the unclarity and ambiguity over ownership and jurisdiction of lands to continue for some time in the future.

3.4 Social welfare payments

During the height of the Soviet state economy there was no clear distinction between regional development subsidies, the sale and distribution of consumer goods, the supply of civic services such as heat and light, and social welfare payments. In a regulated, redistributive economy the prices of goods and services reflected the political priorities of regional and federal units of administration in developing rural areas. With the collapse of the central redistributive system and the privatization of the retail trade network, the need to use direct payments in order to avoid social tragedies has become clearer. It is now possible to discern the beginning of a social welfare net in a sense that is similar to that of a European economy. The budgetary sources for the social welfare network are premised upon transfer payments from federal levels of administration and to a great degree upon industrial firms within the Lower Yenisei Valley as in Soviet times. The economic health of these firms, and hence the social welfare system, depends upon the commerce of the Northern Sea Route.

The main form of social welfare expenditure is that of pensions for old age and physical disability. These pensions, guaranteed by administrative units of the federal state are indexed and regularly supplied. Disruptions in the payment of pensions usually only occur due to shortages of paper money in the regional capitals or to enclimated weather which may delay the flights of welfare officials by one or two months. The regular payment of cash to older people or those suffering from physical disabilities (such as tuberculosis or physical injury) supports a certain kind of social structure within the extensive communities. Since mortality rates for men are very high, the centres of families tend to be older women who mobilize their kinship networks to obtain meat or furs in exchange for cash.

The burden of pensions rests on local enterprises like the collective farms or the urban factories. This has created a heavy drain on resources even for wealthy corporations like the Noril'sk Alpine Metallurgical Plant. It is said that in the city of Noril'sk the rapidly aging population is presenting the Plant with a fiscal crisis over fulfilling its role as pension supplier.

The second major source of social welfare is through child support payments. In most of the extensive settlements of the Lower Yenisei Valley there are a high number of single parent families. Often the fathers of the children in these families have died due to hunting accidents or due to accidents encountered during drunkenness. Sometimes the fathers were transient immigrants who arrive in villages to work for a short period of time. In either of these two cases, which are not that different according to the practical logic which governs day to day life of women in the villages, the children remain as sources of income for the mothers and

grandmothers and as helpful producers as they grow older. It has long been a policy of regional administrative units to channel direct welfare payments to single mothers since it is a demographic fact of these villages that such payments strategically reach the largest numbers of people.

The last category of social welfare expenditures for individuals are payments for unemployment and for poverty. These payments are very small and very rarely paid out. There is a very shallow tradition among administrators for classifying people as poor or unemployed since such categories did not exist under a system that redistributed wealth through places of employment. It is possible that the growing experience with the direct payments will make this a growing area of support for families.

The cash that is allocated to individuals more often than not ends up in the hands of senior women within households. After cash is exchanged for services or for meat it is more often than not spent on vodka. The profits of the supply of social welfare are usually realized by a tightly-linked group of immigrant traders who are able to control the transport links in and out of a community. The heavy drinking in most of the aboriginal communities can be correlated to the decline of reliable supplies of equipment that allow people to engage in their work. The level of alcoholism, which has reached epidemic proportions, is endangering the future reproduction of communities. It is possible to speculate that if a reliable retail network is established, perhaps through the agency of institutions associated with the Northern Sea Route, that the social causes of alcoholism may disappear.

A final form of social welfare expenditure is not paid to individuals but to communities. This is the unorthodox practice of making administrative grants in order to pay for the transport of fuel for heating and to operate diesel-powered electric stations. Under the former system of allocation, electricity and heat were provided within settlements by collective farms as part of their civic responsibilities. Since the end of direct subsidies to collective farms in 1992, the money for the operation of these costly and necessary services has come on a crisis basis from the budgets of regional administrative units. In 1993 there were great expectations for a new law that would place the responsibility for these services on special federal grants - but as of December 1994 no such law has been passed. The reliance on the aid of administrators during crisis makes for an unstable and dangerous system of providing heat and light. This area of civic social welfare will undoubtedly be one of the first areas to be renegotiated as the constitutional status of the new counties and the privatizing institutions of the Northern Sea Route become clear.

There is a clear difference between people who live exclusively within the extensive settlements and those producers who live for large portions of time on the land. The village residents are highly dependent upon social welfare expenditures so that their houses may be heated and that they may be able to buy or barter for food to

feed their families. This section argues that the networks set up by individuals receiving guaranteed incomes also extend out to those who live on the land through barter. In a highly indirect fashion, the networks of barter and mutual aid between village residents and between villagers and hunters and herders on the land are underwritten by a social welfare system which, in turn, depends upon the commerce of the Northern Sea Route.

3.5 Aboriginal Rights

Since 1989 in the Lower Yenisei Valley, as in other parts of Siberia, there has been a growing movement for the respect of the rights of the native peoples. This movement is only formally represented within the territory of the Taimyr. Within Dudinka there are two associations. The first is the Association of the Native Peoples of Taimyr. The second is the Association of the Native Peoples of the Dudinka City Council. The former is funded by the Administration of the Taimyr. Although the Association of the Native Peoples of Taimyr has a wider jurisdiction, it is considered to be the more passive association. The Dudinka Association works with the volunteer efforts of many groups and is quite active in organizing meetings and making statements to the press.

The focus of most initiatives of the Associations of Native Peoples have been to collect information about injustices done to native residents of the area. This information is reported to the main congress of Native Peoples which is held once a year in Moscow. The tenor of these observations is to remind the Federal and Regional states of their responsibilities to continue to supply special programmes and subsidies to native people. The Associations report upon pollution associated with the Noril'sk mining complex but very sophisticatedly restrain themselves from directly criticizing the plant. Through their activities the organizers of these associations hope to draw attention to the problems of native peoples in the current conjuncture of rapid institutional change. By raising the issue of aboriginal poverty, alcoholism, and rights to territory they hope that the newly privatized monopolies will maintain a favourable policy to the aboriginal communities.

The cautious policies of the aboriginal associations have had some success. The Noril'sk factory in general has been sympathetic to native communities. It expresses its sympathy through the distribution of gifts such as foreign made snowmobiles or imported clothing free of charge to communities - or its willingness to provide free transportation to native residents in association with its exploration activities. In addition, during the recent privatization of the gas pipeline firm, native peoples were given preferential share options. However, it would be unreasonable to expect that native activists will be satisfied with these overtures in the long run. The larger question of aboriginal equity and rights to land will no doubt have to be addressed in a more fundamental manner. The trajectory of the aboriginal rights movement in terms of its ability to pose and negotiate these larger questions is still at an early stage.

Conclusion

In assessing the social impact of the Northern Sea Route on the aboriginal peoples of the Lower Yenisei Valley one must distinguish between direct effects, indirect effects, and social structural effects. In describing the ecology, ethnology, and economy of the rural areas inhabited by the native people I have shown the interrelationship of all three types of factors.

A) Direct Effects:

i. The open sea lanes maintained by ice-breaker year-round have formed a new natural barrier to the migration of wild reindeer. The consequent chaotic migratory behaviour of the Taimyr population of wild reindeer has threatened a source of staple foods for native groups living throughout the Lower Yenisei Valley and can be blamed for destroying the local economy of reindeer herding of the Dolgan and Ngos.

B) Indirect Effects:

- i. The intensive industrial activity which depends upon the operation of the Northern Sea Route is responsible for creating an expanding ring of pollution and uninhabitable land. The result of heavy metal and sulphur dioxide pollution has been to push native producers to the boundaries of their traditional lands, to induce a land shortage, and to instill conflicts around the overlapping of territories of different aboriginal groups.
- ii. The industrial infrastructure which is necessary to the factories of Noril'sk has formed significant natural barriers to movement. These barriers, such as the Khantaiskoe and Kureiskii reservoirs, and the Noril'sk- Messokhansk gas pipeline, have removed productive lands from use and have isolated several villages into a reliance on air transport.

C) Structural Effects:

- i. The intensive international commerce in the Lower Yenisei Valley, which is only possible with the operation of the Northern Sea Route, underwrites in a complex way a chain of subsidies which are distributed to aboriginal peoples. Emergency administrative grants, capital gifts, collective farms, and the social welfare system depend upon the health of international trade in the region.
- ii. The fragmentation of sovereignty after the disintegration of the Soviet state has led to a bifurcation in the distribution of the economic benefits of commerce, which in turn, depends upon the Northern Sea Route. Areas in direct, administrative contact with the industries that use the sea route are able to maintain a complex division of labour in association with the urban centres. Areas placed to the margins of industrial activity are left to a locally reliant subsistence lifestyle.

Recommendations following from the specific direct, indirect, and structural effects of the Northern Sea Route would have paradoxical effects. This is due to the fact that any *benefits* of the Northern Sea Route to native peoples arise in the category of structural effects while the *adverse* impacts are either direct or indirect impacts.

It would be a relatively simple matter to reduce the direct effect of the Northern Sea Route on the movement of wild reindeer. By reducing the movement of ships in November and December the conditions would be created for the resumption of the traditional migration routes of the wild reindeer. However, since the migration routes have already changed so significantly, it is unlikely that such a change in the shipping schedule would bring about any immediate benefit. One Russian official has suggested that the proposed construction of a railway from Vorkuta to Noril'sk will reduce ice-breaker traffic along the Yenisei River and hence reduce the impact upon migration routes. Such a rail line may reduce ice-breaker traffic but would only further confine and segment the movements of animals and people. One could only expect that such a construction project would again heighten the responsibility of the state for impacting upon the ecological relationship between hunters and the land.

The reduction of the emissions of sulphur dioxide, heavy metals, and acid rain are a very serious indirect effect of the expansion of industry in the area. It is imperative that commerce related to the Northern Sea Route not increase the amount of pollution. Any increase in the amount of pollution is likely to result in even stronger political pressure for direct financial compensation. The reduction of airborne pollution is technically feasible, but only at the great cost of rebuilding many aspects of the production process. However, even if pollution were reduced within one year's time, the existence of vast barren zones and territories isolated by reservoirs and pipelines would continue to trouble aboriginal producers. Any benefit of the Northern Sea Route to aboriginal people, therefore, could only come in the structural sphere.

This report has emphasized that the institutional structure of the Lower Yenisei Valley provides a crucial lifeline for aboriginal producers be they producers on the land or residents of extensive villages. Although this structure is crumbling, it is important that any commercialization of the Northern Sea Route not further the decay of these institutions. There are several possible institutional innovations which if supported by the Northern Sea Route Administration could lead to the direct benefit of native peoples:

- 1) The establishment of a trust-fund like that in the Khanti-Mansi Autonomous *okrug* which would reserve 15-20% of all proceeds from commerce on the Sea Route for the supply of transportation, heating, and electricity to native communities. Such a fund would have the flexibility to provide for those outlying villages which happen to fall outside of the boundaries of Taimyr and the subsidies of the Noril'sk factory.

- 2) The foundation of a transportation consortium under the direction of the Sea Route authority which would see to the transport of cargo destined to native villages at a subsidized cost.
- 3) The foundation of a retail trade organization which would distribute essential consumer goods to native villages at a subsidized cost.
- 4) The provisions of equity shares in the Sea Route for native communities.

Although the political consciousness of the associations which represent native people are at an early stage of organization, it is not unreasonable to expect them to gain momentum in making more vociferous demands which challenge the present structure of economic and political power. Current proposals for aboriginal rights resemble those advocating the establishment of a "city-state" where rural native peoples are directly incorporated into the fabric of the Noril'sk Metallurgical Plant or the Igarka forestry enterprise. If native communities did not receive equity in future industrial developments, it would be reasonable to anticipate the demand for a "land claim" by local communities on the state. Such a proposal, which has only been casually discussed by activists, would bear many similarities to the struggles of aboriginal groups in the Canadian and American Arctic. It could be assumed that under a potential land claim agreement native groups would ask for direct compensation for the pollution and flooding of their lands by industry. The only alternative to a renewed institutional framework, or a land-claim would be the fragmentation and isolation of native communities - an alternative which would only lead to the further impoverishment of groups already in a cultural and demographic crisis.

Further Research

To better understand the impact of the Northern Sea Route on the aboriginal peoples of the Lower Yenisei Valley further research is needed on the demographics of the region and on the changes in administrative sovereignty. The recent shifts in economic affluence have led to a massive outmigration of personnel which have put strains upon those firms which require trained specialists to operate civic infrastructure. Without an understanding of the new ways in which authority is being divided it is difficult to know with which level of government it is most appropriate to conduct negotiations on social welfare. Both projects could only be understood by conducting research in a variety of intensive and extensive communities throughout the Valley.

A second field research project is necessary in order to understand the institutional and ethnological dynamics of Khantanga county in the Eastern portion of the Taimyr.

Tables**Table 1.1 Intensive and Extensive Settlements and their Population Size, Ratio of Natives to Non-Natives, and Administrative Districts³**

Settlement and Category	Population	% Native	Administrative District
Extensive Settlements:			
Vorontsovo	449	69.2 % (311)	Ust'-Yenisei County, Taimyr
Baikalovsk	195	71.8% (140)	Ust'-Yenisei County, Taimyr
Nosok	1,385	72.6% (1,005)	Ust'-Yenisei County, Taimyr
Karaul	1040	12.6% (131)	Ust'-Yenisei County, Taimyr
Ust'-Port	740	44.3% (328)	Ust'-Yenisei County, Taimyr
Ust'-Avam	701	90.6% (635)	Dudinka City Council, Taimyr
Volochanka	942	80.3% (756)	Dudinka City Council, Taimyr
Khantaiskoe Ozero	540	88.1% (476)	Dudinka City Council, Taimyr
Potapovo	509	49.5% (252)	Dudinka City Council, Taimyr
Levinskii Peski	467	49.9% (233)	Dudinka City Council, Taimyr
Sovetskaia Rechka	148	99.8 % (146)	Turukhansk County, Krasnoiarisk Krai
Yanov Stan	12	41.6 % (5)	Turukhansk County, Krasnoiarisk Krai
Maduika	84	95.2% (80)	Turukhansk County, Krasnoiarisk Krai
Goroshikha	212	39.2% (83)	Turukhansk County, Krasnoiarisk Krai
Intensive Settlements:			
Dikson	4,341	N/A	Ust'-Yenisei County, Taimyr
Mesoiansk	1,035	51.5% (533)	Dudinka City Council, Taimyr
Dudinka	32,180	1.9 % (606)	Dudinka City Council, Taimyr
Noril'sk	179,757	0.00 % (146)	Noril'sk Industrial County, Krasnoiarisk Krai
Snezhnogorsk	N/A	N/A	Noril'sk Industrial County, Krasnoiarisk Krai
Svetlogorsk	N/A	N/A	Noril'sk Industrial County, Krasnoiarisk Krai
Igarka	26,506	0.00 % (66)	Igarka Industrial County, Krasnoiarisk Krai
Turukhansk	N/A	N/A	Turukhansk County, Krasnoiarisk Krai

³ Sources: Data for Taimyr are Jan. 1, 1990, from Administration of the Taimyr AO. Data for Turukhansk County are Jan. 1, 1988, from the Department of the North of the Administration of Krasnoiarisk Province. Data for all intensive settlements excepting those of Ust'-Yenisei County are 1989, from the Provincial Statistical Committee of Krasnoiarisk Province. A.A. Petrushin is gratefully acknowledged for assistance in assembling the figures.

Official Ethnonymn	Vernacular Ethnonymn (<i>pl</i>)	Population					
		1990	1979	1970	1959	1940	1926 ⁵
Dolgan - Total	Sakha (<i>Sakhalar</i>)	4,858	4,338	4,344	3,871	2,785	1,231
Taimyr		4,858	4,338	4,344	3,871	2,785	
Yakut - Total	Sakha (<i>Sakhalar</i>)	N/A	53	64	63	1,183	1,826
Taimyr		N/A	53	64	63	1,183	
Nenets - Total	Nenets (<i>Nenets''</i>)	2,445	2,345	2,247	1,789	1,704 ⁶	2,730 ⁶
Taimyr		2,445	2,345	2,247	1,789	6 1,704	
Evenk - Total	Evenki (<i>Evenkil</i>)	474	444	413+	413+	1,121	832
Taimyr		328	338	413	N/A	563	
Turukhansk County		146	106(1988)	N/A	413	558	
Nganasan - Total	Ngo (<i>Nia</i>)	812	746	765	711	822	[867] ⁶
Taimyr		812	746	765	711	822	
Enets - Total	Enneche	85	N/A	179	18	- ⁶	[378] ⁶
Taimyr		85	N/A	179 (1966)	18	-	
Ket - Total	Ket (<i>Deng</i>)	118	78	N/A	N/A	N/A	(751)
Taimyr		1	0	0	2	0	29
Turukhansk County		117 (1988)	78	N/A	N/A	N/A	183
Sel'kup - Total	Shol'kup	34	45+	N/A	N/A	N/A	(1,662)
Taimyr	(<i>Shol'kupmyt</i>)	2	N/A	N/A	N/A	N/A	18
Turukhansk County		32 (1988)	45	N/A	N/A	N/A	59

⁴*Sources:* Data for the years 1939, 1959, 1970, 1979, and 1989 are of questionable validity. All data used here are from the following sources unless otherwise marked: *Taimyr 1990*, The Statistical Administration of the Taimyr *okrug*; *Taimyr 1959-1979*, The Department of the North of the Administration of Krasnoirsksk Krai, Taimyr 1940, The Administration of the Taimyr *okrug*; *Turukhansk County 1959, 1979 and 1990*, The Department of the North of the Administration of Krasnoirsksk Krai.

⁵All 1926 data are from *Materialy Pripoliarnogo perepisa 1926-27* (Novosibirsk 1929). The totals are for Turukhanskii *krai*, an administrative unit which encompassed the contemporary territories of Taimyr, Turukhansk County, and Tazovskii *raion* (Tomskaiia *oblast*). While the inclusion of the latter district does not affect the totals for Dolgans, Yakuts, Evenkis, and Nenets living in Taimyr, it does increase the numbers of Kets and Shol'kups. Working from the original source, I estimated new totals for Kets and Shol'kups (shown here in brackets) which represent their 1926 populations in Turukhanskii *krai* excluding Tazovskaia *volost*'. The regional totals (labelled Taimyr and Turukhanskii County respectively), represent Dudinskaia *volost*' and Monastirskaia *volost*' in this source. In this census the Enneches and the Nganasans were poorly distinguished from the Nenets. Their totals [shown here in square brackets] are from Levin & Potapov *Narody Sibiri* (Moscow, 1956).

⁶The total for the Nenets for the year 1926 most likely includes those people who would now be classed as Nganasans or Enneches. In 1940 the total for the Nenets most likely includes the Enneches.

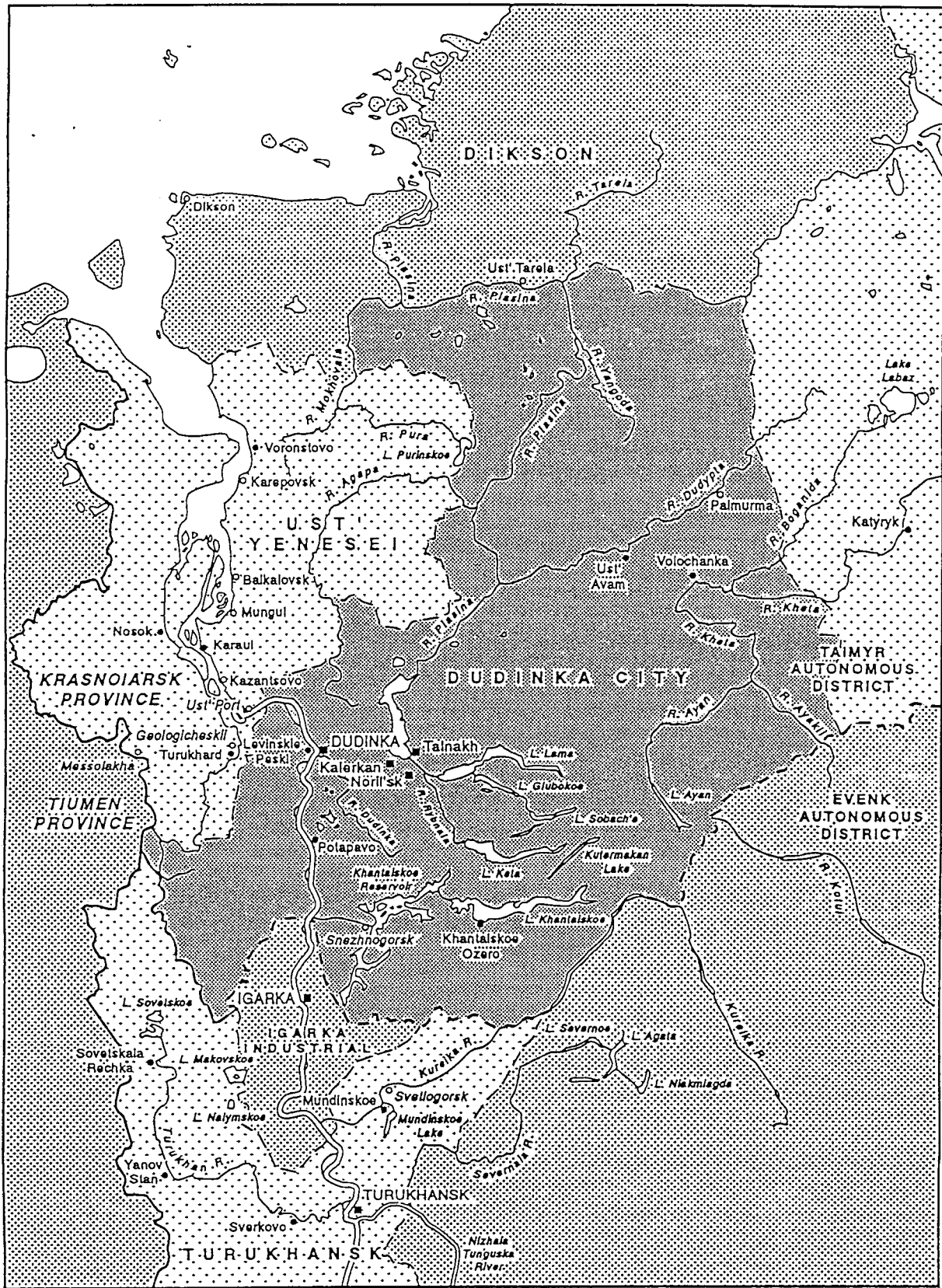
Table 3.1 Selected 1989 Production Indicators for State Farms and City Fish Processing Factories of the Taimyr Autonomous *okrug*.⁷

Enterprise	Fish (tonnes)	Arctic Fox (rubles) [estimated number] ⁸	Blue Fox (rubles) [estimated number] ⁸	Households with Private Deer (N)	State Reindeer
Severnyi	127.4	43,196 [1,079]	0	4 (175)	1,146
Zaria Taimyr	287.3	46,642 [1,166]	35,273 [504]	152 (11,049)	12,406
Turukhard	18.2	N/A	N/A	N/A	18,544
Ust'-Eniseiskii	136.2	24,689 [617]	0	N/A	0
Piasino	41.7	92,287 [2,307]	45,042 [643]	0	0
Volochanskii	90.2	34,528 [863]	40,087	0	0
Khantaiskii	296.8	0	10,620 [354]	22 (297)	4,269
Potapovskoe	40.5	N/A	268,829 [3,840]	16 (188)	5,000
Enisei	160.7	N/A	N/A	0	0
Dikson Factory	251.2	218,400 [5,460]	0	0	0
Dudinka Factory	1,144.0	0	0	0	0
Noril'sk Factory	782.4	0	0	0	0

⁷ Source: The Administration of the Taimyr Autonomous *okrug*.

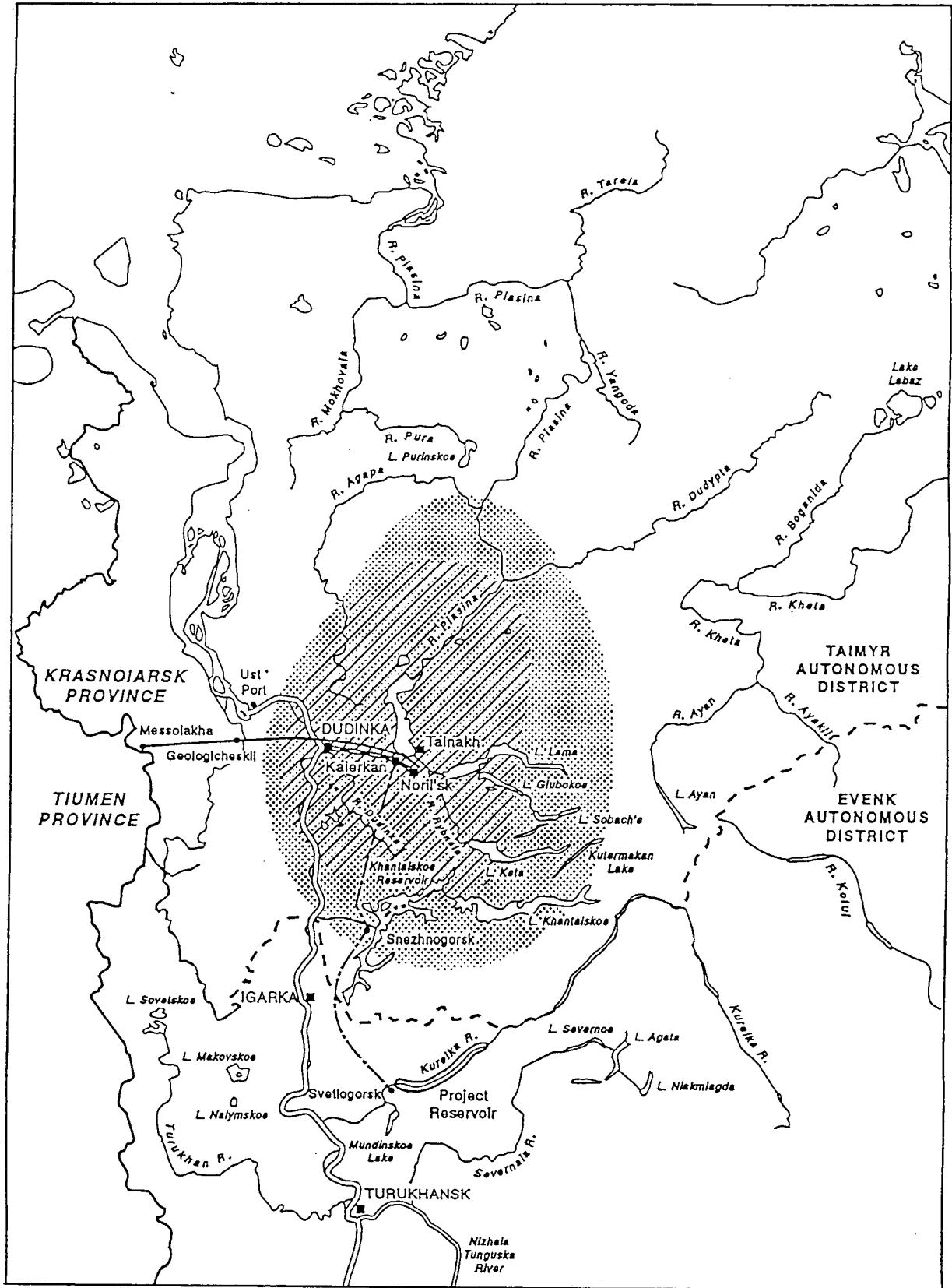
⁸ All state prices for fur were stable until 1989 and therefore provide useful comparisons. The number of animals caught were estimated from a price of 40 rubles for an arctic fox and 70 rubles for a blue fox.

Map 1.1 : The Lower Yenisei Valley showing Villages, Cities, Intensive Settlements and Administrative Boundaries



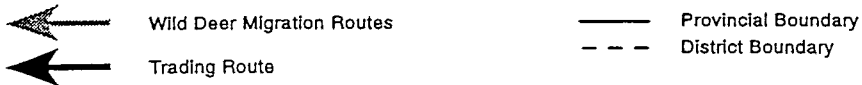
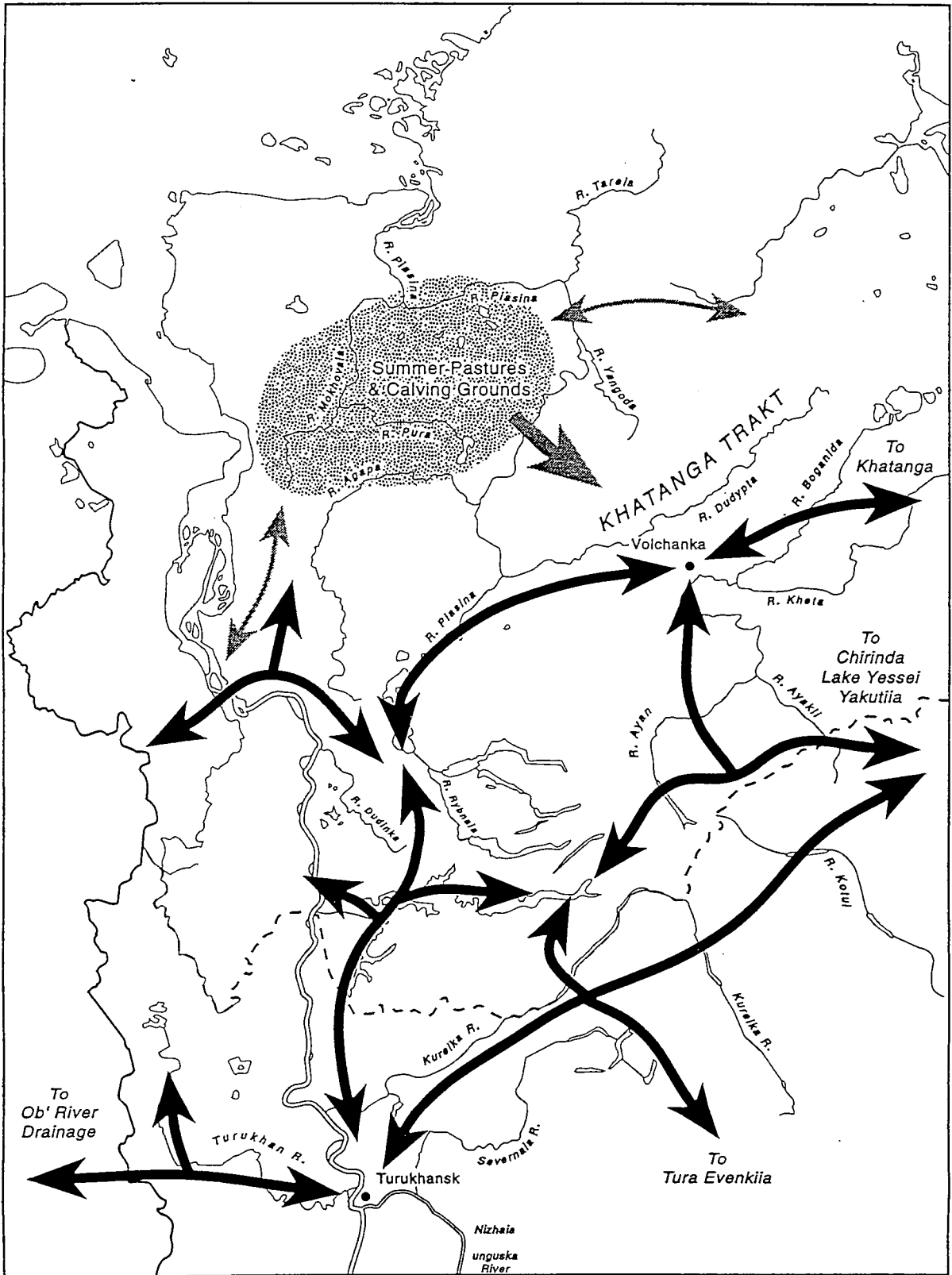
- Villages with State Farms
- Cities
- Resource Extracting Settlements
- Abandoned Villages
- Provincial boundary
- - - District boundary
- - - County boundary

**Map 1.2 : The Contemporary Effect of Industry :
Approximate Areas of Heavy Metal Pollution and Energy Corridors**

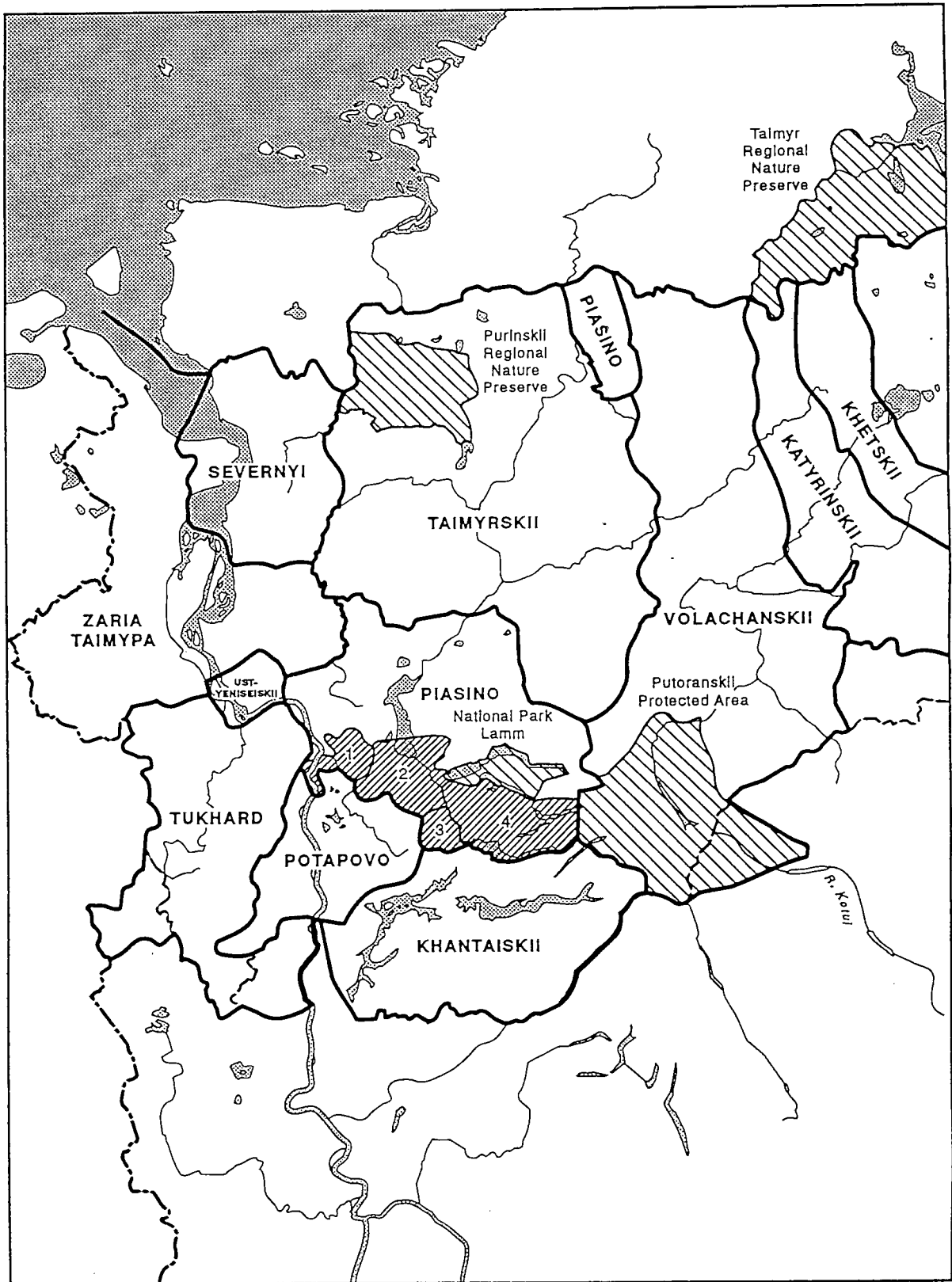


- | | | | | | |
|-------|---------------------------------|---|-----------------------|-------|-------------------------|
| ■ | Cities | ▨ | Heavy Metal Pollution | — | Pipeline |
| • | Resource Extracting Settlements | ▧ | Copper & Cadmium | —+— | Railway |
| — | Provincial Boundary | ▩ | Nickel | —+—+— | High Voltage Power Line |
| - - - | District Boundary | | | | |

Map 1.3 : Historical Overland Trading Routes and Fall Migration Routes of Wild Deer



Map 2.1 : State Farms and Nature Reserves of the Taimyr



----- Provincial Boundary
 - - - - - District Boundary

□ State Farm Boundary
 ▨ City Territories
 ▩ Parks

City Territories
 1 - DUDINKA RESERVE LAND
 2 - NORL'ISK INDUSTRIAL COUNTY
 3 - NORL'ISK RESERVE LAND
 4 - FISH PROCESSING PLANT

The three main cooperating institutions of INSROP



Ship & Ocean Foundation (SOF), Tokyo, Japan.

SOF was established in 1975 as a non-profit organization to advance modernization and rationalization of Japan's shipbuilding and related industries, and to give assistance to non-profit organizations associated with these industries. SOF is provided with operation funds by the Sasakawa Foundation, the world's largest foundation operated with revenue from motorboat racing. An integral part of SOF, the Tsukuba Institute, carries out experimental research into ocean environment protection and ocean development.



Central Marine Research & Design Institute (CNIIMF), St. Petersburg, Russia.

CNIIMF was founded in 1929. The institute's research focus is applied and technological with four main goals: the improvement of merchant fleet efficiency; shipping safety; technical development of the merchant fleet; and design support for future fleet development. CNIIMF was a Russian state institution up to 1993, when it was converted into a stock-holding company.



The Fridtjof Nansen Institute (FNI), Lysaker, Norway.

FNI was founded in 1958 and is based at Polhøgda, the home of *Fridtjof Nansen*, famous Norwegian polar explorer, scientist, humanist and statesman. The institute specializes in applied social science research, with special focus on international resource and environmental management. In addition to INSROP, the research is organized in six integrated programmes. Typical of FNI research is a multi-disciplinary approach, entailing extensive cooperation with other research institutions both at home and abroad. The INSROP Secretariat is located at FNI.

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