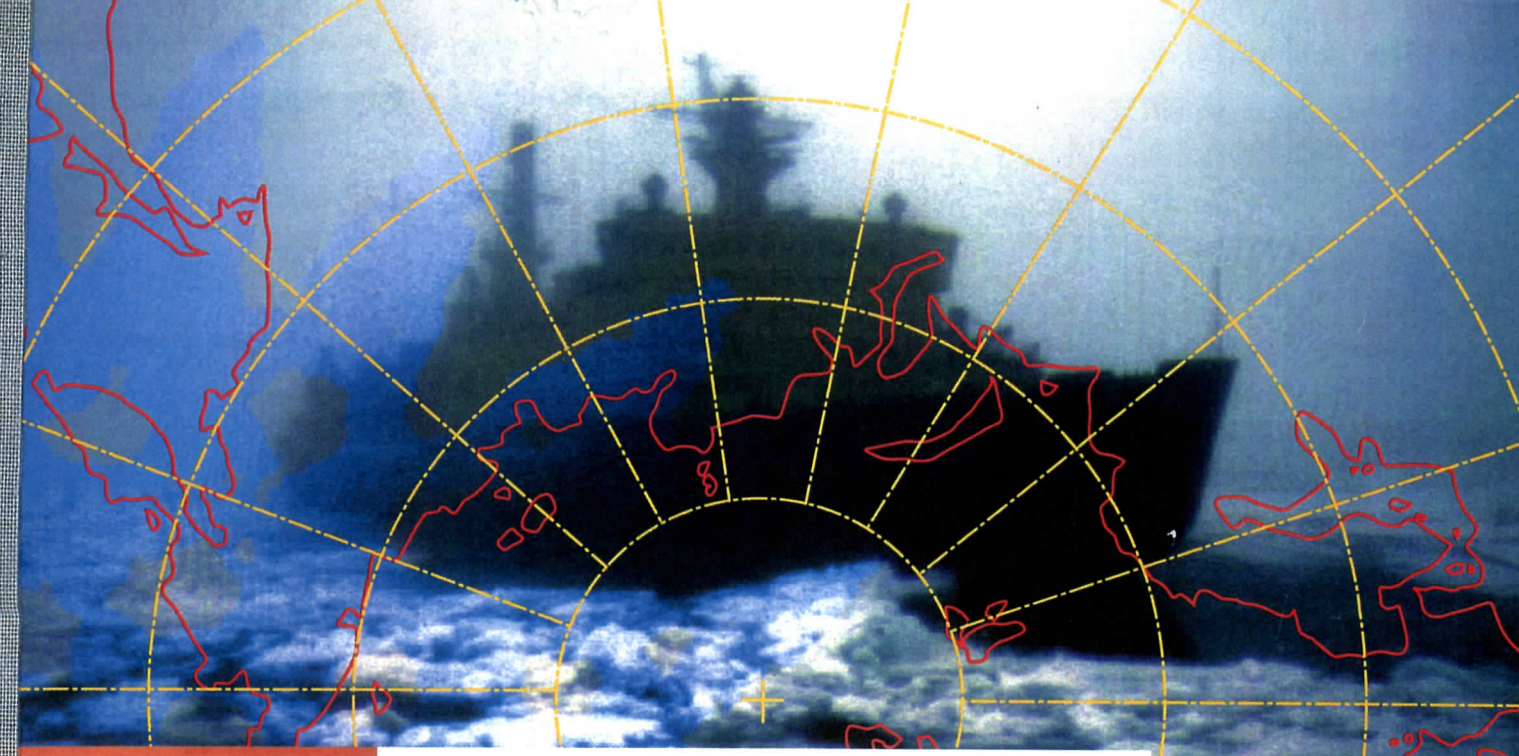
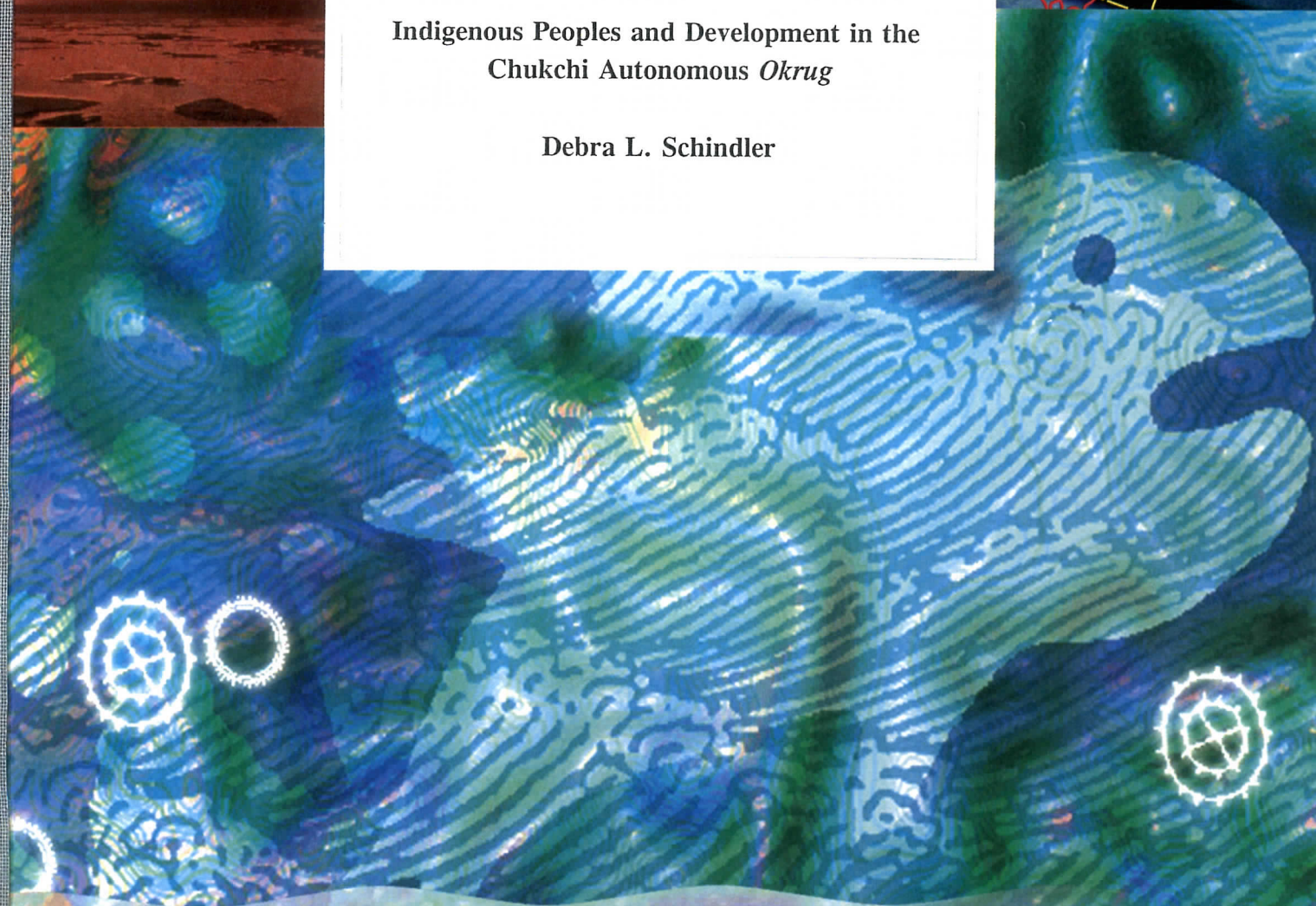


INSROP WORKING PAPER
NO. 51-1996, IV.4.1

Indigenous Peoples and Development in the Chukchi Autonomous *Okrug*

Debra L. Schindler



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International Northern Sea Route Programme (INSROP)

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Title: Indigenous Peoples and Development in the Chukchi Autonomous *Okrug*.

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What is an INSROP Working Paper and how to handle it:

FOREWORD - INSROP WORKING PAPER

INSROP is a five-year multidisciplinary and multilateral research programme, the main phase of which commenced in June 1993. The three principal cooperating partners are **Central Marine Research & Design Institute (CNIIMF)**, St. Petersburg, Russia; **Ship and Ocean Foundation (SOF)**, Tokyo, Japan; and **Fridtjof Nansen Institute (FNI)**, Lysaker, Norway. The INSROP Secretariat is shared between CNIIMF and FNI and is located at FNI.

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 decision making 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.

The complete series of publications may be obtained from the Fridtjof Nansen Institute.

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INSROP DISCUSSION PAPER
FOR PROJECT IV.4.1

Indigenous Peoples and Development in the Chukchi Autonomous *Okrug*

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None of these organizations is responsible for the views expressed in this document.

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Preface

The purpose of this paper is to provide an introduction to the Native peoples of Chukotka within the context of the current social, economic, and political landscape. This landscape is changing constantly, however, therefore attention should be focused on general trends and not specific data (e.g. the number of medical personnel on a given date) which will always be slightly out of date. General information is provided on the Chukchi Autonomous *Okrug* (District), its economy, its political structure, current socioeconomic issues (including environmental and Native rights concerns), and the people who live there. The Northern Sea Route is a vital part of the Chukotkan landscape and the level of support it receives in the future will have a tremendous impact on the lives of the Native peoples.

Further research and contact with Native and non-Native organizations in Chukotka is necessary for successful implementation of any development plans. Suggestions for such research will be presented in the report.

1. Introduction

The Chukchi Autonomous *Okrug* was created in 1930 to provide an ethnically-defined homeland for the Chukchi people within the socialist state. They have thus historically been the focus of communist party and government plans for developing indigenous economies and cultures. The small Yupik (Yupigyt, or Asiatic Eskimo) population of the *Okrug* was of interest to the state only for a very brief period of time when an "Eskimo homeland" was created in 1929, and then quickly abolished in 1932. Today the Yupik are concentrated in a few villages on the coast, and in recent years have reestablished cultural (and sometimes kinship) ties with the Yupik population of Alaska. Other indigenous peoples in the *Okrug*- Even, Yukaghir, Koryak, etc. are minorities within minorities, whose basic mass is to be found outside the *Okrug*. The cultures of these individual peoples have their own differences in independence from trends in the economy, in local natural-climatic conditions, and historical heritage.

The Chukchi Autonomous *Okrug* forms the eastern terminus of the Northern Sea Route as defined by INSROP, although this vital shipping route continues down the eastern coast of Russia to Magadan, Nakhodka, Vladivostok and numerous ports between and beyond. The Provideniya hydrographic base is charged with the task of ensuring safe navigation between the 160(20' meridian east longitude all the way up the coast to Provideniya Bay, including the Medvezh'i Islands in the East Siberian Sea, Vrangel Island, other islands, and the coastlines of the East Siberian, Chukchi and Bering Seas. The post-Soviet economic crisis has made it very difficult for the organization to do its job: ships have fallen into disrepair, highly trained personnel have returned to central regions of the country, forecasting technology is inadequate, etc. Urban centers and port facilities in Chukotka differ dramatically from those in major centers such as Igarka, Dudinka, and Salekhard in the western reaches of the Northern Sea Route. The total population of Chukotka is significantly smaller and the infrastructure of ports and industrial centers is correspondingly less-well developed than in either the Yamal Peninsula or Lower Yenisei River Valley areas. With increasing decentralization and privatization, port authorities have been hard

pressed to maintain their facilities and pay their workers. Similar, however, to both Yamal and the Lower Yenisei, the Native villages of Chukotka are very poorly supplied and have inadequate infrastructures, which results in even more difficult living and working conditions than are found in industrial settlements and towns.

The mining of non-ferrous metals is the most important aspect of Chukotka's economy from a Russian national perspective, but reindeer breeding, fishing, and hunting, which provide immediate returns of food, are the most important aspects of the local indigenous economy. The Bilibino Atomic Energy Station, Chaunskii Heat and Electric Power Station, and the Egvekinot Regional Power Plant provide electricity to settlements close to industrial areas, but many settlements have their own electric-generating plants which use coal as fuel. The Northern Sea Route provides the only relatively reliable transportation route for the importation of consumer goods, foodstuffs, building materials, and fossil fuel. All building materials and fuel, and most foodstuffs and consumer goods are imported into Chukotka. A short navigational season makes shipping in this region critical to the survival of the people who live there.

Socioeconomic development in Chukotka today is under the aegis of *Goskomsevera,* the State Committee of the Russian Federation on the Socioeconomic Problems of Development of the North. This Committee is charged with the coordination of government activities in the North regarding the economic and social development of the region, and environmental issues. *Goskomsevera* currently has four main programs : 1).environment and health of northern residents, 2) problems concerning indigenous peoples, 3) economic development, and 4) improving the efficiency of resource utilization and development. The government allocated 6.4 billion rubles (1984 prices) for the development of the indigenous peoples in the period 1991-1995. The work of *Goskomsevera* is not, however, focused on indigenous issues. It is also working to establish measures to overcome the socioeconomic crisis in the North. Such measures would include special privileges for northern residents, special legislation on privatization, prices, and taxation, guarantees of consumer goods, foods, the provision of social assistance to the needy, etc. (RA Report 1993 [15]:158-159).

The collapse of the Soviet Union, decentralization, privatization, and increasing criminal activity (including political corruption) have struck Chukotka hard. For the past several years, special declarations have been issued declaring states of emergency in Chukotka during the winter months. In the past, shipments of fuel and foodstuffs from outside the *Okrug* were ordered to Chukotka and the direct or immediate payment of money to shipping lines or producers was not an issue. In a market economy, however, everyone needs to be paid and when they aren't they shut off the supply- food, fuel, consumer goods, electricity, etc. Chukotka's government regularly issues resolutions (see for example *Postanovlenie*...1994) to force shipments of essential supplies and delay payments in an attempt to control the situation and allay people's fears that there will not be enough fuel to heat their homes during the coldest months of the year. The success of such resolutions is variable.[1]

Economic and social stratification, despite Soviet claims to the contrary, is significant between Natives and non-Natives. Inter-ethnic conflicts are found over a wide range of issues, from priority land-use to government subsidies for health care, housing, and education. The formal organization of Native peoples into associations which demand rights of priority land-use, cultural freedom, educational opportunity, etc. has increased ethnic tensions in new ways. In spite of the recent mass exodus of non-Native peoples from Chukotka, the majority of the population is non-Native and Russian. Racism is not an insignificant factor in social, economic, and political spheres and has historically been a defining characteristic of many government policies in this area.

2. Geography

The Chukchi Autonomous *Okrug* is located in the far northeastern corner of Russia. On its western border is the Sakha Republic (Yakutiya) and to the south is Magadan *Oblast* and the Koryak Autonomous *Okrug*. The *Okrug* center, Anadyr, is approximately 6400 kilometers (as the crow flies) from Moscow. The territory of the *Okrug*, including associated islands, encompasses

[1]Such resolutions are in accordance with similar resolutions issued by the Moscow government regarding the supply of food, fuel, and other critical goods and services throughout the Russian Federation.

737,700 square kilometers, approximately two-thirds of which are located below the Arctic Circle. The land here is a combination of tundra and mountainous taiga. Permafrost is continuous and ranges from 60 meters to over 250 meters in depth. The Chukchi Peninsula has many mountain groups and ranges which trend in different directions. The Chukotka Plateau extends from Chaunskaya Bay east to the Bering Strait and south to Providenskaya Bay. It provides a watershed for rivers which flow to the seas in the Arctic basin and also to the right tributaries of the Anadyr river which flow into the Bering Sea. Elevations on the Plateau average between 800 and 1200 meters and reach a maximum of 1500 meters. The lowlands of Chukotka, most of which coincide with coastal areas, occupy relatively little area but are characterized by numerous lakes and swamps (*Demograficheskii...*1985, Leont'ev 1973; Pika, Terentyeva and Bogoyavlensky 1993; *Sever...*1970; Suslov 1961).

The climatic conditions of Chukotka are severe: low air temperatures and constant, high winds are characteristic. Kolyago's (1970: 38-47) classification of Siberia's climate shows Chukotka as ranging through all four degrees of "harshness" from "low harshness" along the coast near Anadyr, to "very high harshness" in Bilibinskii *raion* (region)[2] (Figure 1). The average annual temperature in Anadyr (64 degrees 27' N latitude and 177 degrees 34' E longitude) is -8.1 degrees Celsius. Anadyr has a mean annual relative humidity of 82% and an annual average of 33 days of fog evenly distributed throughout the year (Mote 1983). Snow cover varies: the Chukchi highlands may have snow from October to May (240 to 280 days) while the southern rim of this area may only have snow on the ground from November through April (160 days). Snow depths in the Chukchi-Kamchatka uplands range from 60 to 100 cm and can be complicated by drifting to 5 meters. Rain, snow, and fog are important variables in transportation and working conditions in Chukotka, and have a considerable negative impact on industrial productivity (Burkhanov 1970; Mote 1983).

[2]A *raion* is an administrative unit; plural *raiony*.

Subtypes	Number of days with mean daily temperatures below -15 C	Number of Days with mean daily temperatures below -30 C	The mean of absolute annual minimum temperatures	Mean January temperature
Low harshness	60 to 90	1 to 21	-32 to -48	-18 to -20
Medium harshness	90 to 120	4 to 50	-36 to -54	-24 to -26
High harshness	120 to 150	30 to 95	-39 to -57	-30 to -32
Very high harshness	over 150	45 to 130	-46 to -64	-36 to -38

Figure 1. Categories of Climate in Chukotka.[3]

The river systems of Chukotka drain into the Pacific and the Arctic Oceans (see Map 1, p. 9). The largest rivers are the Anadyr, the Bol'shoi and Malyi Anyui, and the Amguema. The Anadyr and the lower reaches of the Anyui are navigable, however the average duration of freeze-up is from 200-250 days, allowing little time for river transportation (Leont'ev 1973).

The seas which border Chukotka – the East Siberian Sea, the Chukchi Sea, and the Bering Sea – are characterized by typical arctic climatological indexes and by very unfavorable navigational regimes: high icing, a short period without ice, and variable navigational conditions in different parts of each sea. Each, however, has its own particular features which affect its productivity in terms of marine life and economic activities (Leont'ev 1973). Ocean transport is limited to June through October in the eastern Arctic, and requires the use of ice-strengthened ships and ice-breakers. Two currents predominate in the seas of Chukotka. One is a warm current which flows across the Bering Sea from south to north, only approaching the coastline along the Bering Strait and the village of Chaplino in Providenskii *raion*. The second influential current in this area

[3] This figure is taken from Mote (1983), who cites Kolyago (1970) as his source. Although the figure in Mote's article and Kolyago's typology characterize all of Siberia and the Far East, each of Kolyago's four types is represented in Chukotka, beginning with "Low Harshness" along the eastern coast, and increasing to "Very High Harshness" moving west, toward the Sakha Republic. The data presented in the table are, therefore, also relevant specifically to Chukotka and demonstrate the wide variability of conditions found there.

is cold and flows along the northern coast of Chukotka from northwest to southeast (Pika, Terentyeva, and Bogoyavlensky 1993).

3. Ecology

A variety of tundra vegetation covers Chukotka providing food and shelter for reindeer, birds, and other animals. Swamps predominate on the plains, while sedges, sheathing cottongrass, dwarf shrubs, mosses, and lichens cover the higher ridges. As elevation increases Arctic tundra species become spotty and detritus increases. At the highest elevations there is no vegetation and isolated pockets of snow may be found year-round.

The land mammals in Chukotka are varied and include wild reindeer (*Rangifer tarandus*) and elk/Siberian moose (*Alces alces*). Ground and aerial surveys conducted between 1985-1987 provided estimates of 16,000–18,000 head of wild reindeer, concentrated primarily in the interior tundra zones, especially in the area around Lake El'gygytgyn. Historically, wild deer would migrate across the entire peninsula along spring and summer routes. Today these deer no longer make long-distance seasonal migrations, but are restricted in their movements due to human activities and environmental circumscription (Chernyavskii, Aksenov, and Krechmar 1990; Pika, Terentyeva and Bogoyavlensky 1993). European grizzly bears or brown bears (*Ursus arctos*), polar bears (*Thalarctos maritimus*), arctic fox (*Alopex lagopus*), red fox (*Vulpes vulpes*), wolves (*Canis lupus*), arctic hare (*Lepus arcticus*), mountain sheep, ermine (*Mustela erminea*) and wolverine (*Gulo gulo*) are the other major land species present (Krupnik 1993; Leont'ev 1973; Pika, Terentyeva, and Bogoyavlensky 1993).

During the summer months both tundra and coast are home to many species of migratory fowl, including brunnich guillemots (*Uria lomvia*), cormorants, puffins (*Lunda cirrhata*), ptarmigan, white grouse, ducks, and geese (Pika, Terentyeva, and Bogoyavlensky 1993). Chukotka's islands provide important nesting sites for birds.

The seas around Chukotka are rich in marine life and sea mammals have been especially significant in both the prehistory and history of the area. A variety of pinnipedia are found here,

including bearded seal (*Erignathus barbatus*), harbour seal , ribbon seal , ringed seal (*Phoca hispida*) and walrus (*Odobaenus rosmarus*). Among the cetacea found along Chukotka's coastline are the gray, beluga, bowhead and humpback whales (*Eschrichtius robustus, Dolphinapterus leucas, Balaena mysticetus*, and *Megaptera novaeangliae* respectively). Chukotka's islands also provide important breeding grounds for walrus.(Krupnik 1993; Leont'ev 1973).

Several types of freshwater fish are commercially significant and include nelma, broad whitefish, sig, pike, and burbot. Migratory species of salmon (chum, humpback, sockeye) and Arctic char are present as well, as are pollack, squid and crab, all of which are important commercial species (Pika, Terentyeva, and Bogoyavlensky 1993; Tichotsky 1991).

4. The Human Geography of Land Use

The population of Chukotka is compactly settled, but settlements are widely dispersed and overall population density is low: 0.2 per square kilometer (*Natsional'ny*...1990).[4] The majority of Native people are settled in Chukotskii *raion* and Providenskii *raion*, although all of the *raiony* support reindeer breeding and have associated Native groups. Figure 2 shows the distribution of Native and non-Native residents by *raion*. Approximately 36 communities are directly on the coastline of Chukotka. Map 1 (p. 9) illustrates administrative divisions, *raion* centers and coastal settlements. [5]

As in both the Yamal Peninsula and the Yenisei Valley regions, land use in Chukotka can be characterized by two competing land use strategies: extensive and intensive. Extensive land use practices primarily encompass the traditional subsistence activities of the Native peoples- hunting, fishing, and reindeer herding in contrast to intensive and more localized industrial activities such as

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[4]This figure was current at the beginning of 1990.

[5]Map 1 shows the coastal settlements that generally appear on Russian maps. There are other, temporary hunting, herding, and fishing bases along the coast which are not shown here. In addition, in recent years some of the old settlements closed under the Soviets are being resettled by small groups of individuals; these settlements do not appear on this map.

extraction and exploitation of mineral resources. David Anderson's[6] characterization of these two land use strategies and the knowledge required of each is equally relevant to Chukotka. Herders,

Raion	Area (sq.km.)	Native Population	Non-Native Population	Totals
Anadyrskii		4506		
Beringovskii		1332		
Iul'tinskii	72.7	1296	14825	16121
Providenskii	26.8	2275	7706	9981
Chukotskii	30.7	3407	3528	6935
Chaunskii	58.1	786	32777	33563
Shmidtovskii	70.9	757	15938	16695
Bilibinskii	174.7	1860	27356	29216

Figure 2. Population of Chukotka by *raion*.[7]

hunters, and fishermen have considerable knowledge and expertise regarding the wide variety of landforms and marine conditions found in and around Chukotka. For thousands of years this knowledge has allowed Native peoples to provide themselves with food, clothing, shelter, and other basic necessities of life. Flexibility in movements to pasture and hunting grounds as well as other resource procurement strategies provided more opportunities for people to overcome short falls in one area of subsistence or another. Extensive land use practices were reflected in a variety of settlement patterns and population mobility in accordance with seasonal procurement strategies.

The introduction of new technology such as snowmobiles, all-terrain vehicles, and firearms may have done less to change the traditional practices of Chukchi and Yupik peoples than has the control and management of their economic activities by the Soviet government through its policies of collectivization and forced resettlement into compact areas. One aspect of this control which differentiates the experience of Native peoples in Chukotka is the state's policy of forced sedentarization. Although the idea that nomadic peoples throughout the Far North should be settled in "modern" permanent villages was an important part of the Soviet nationalities policy, the extent

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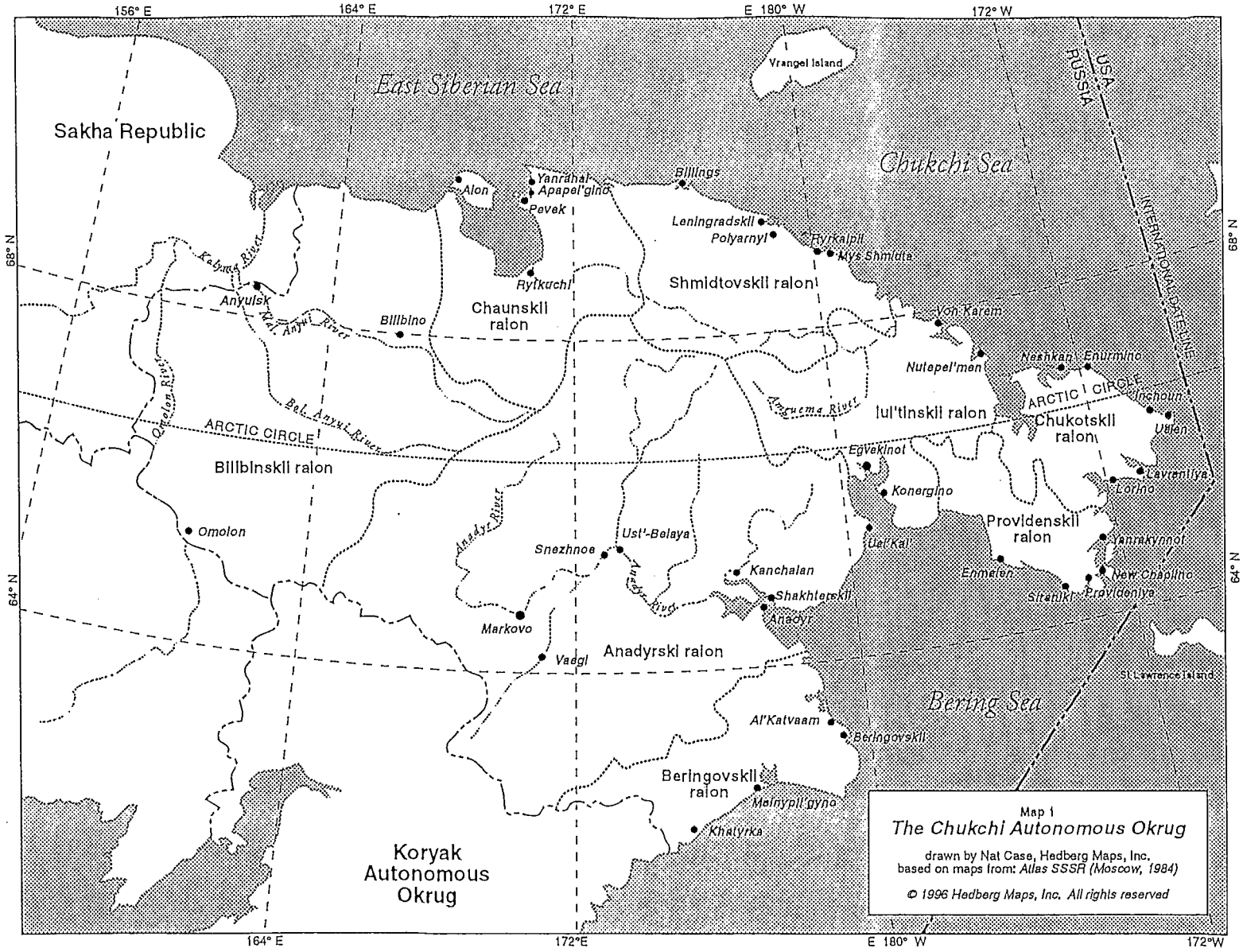
[6] INSROP Working Paper No. 18-1995, VI.4.1."Indigenous Peoples and Development of the Lower Yenesei Valley."

[7] Figures are from a typescript document by Alexander Pika dated 1994, entitled "National (Ethnic) Composition of the Population of the Regional of the Northern Sea Route." Figures are from the 1989 Soviet census.



Map 1

The Chukchi Autonomous Okrug

drawn by Nat Case, Hedberg Maps, Inc.
based on maps from: *Atlas SSSR (Moscow, 1984)*

to which the policy was put into practice varied widely. In Chukotka the implementation of this policy resulted in a serious disruption of traditional herding practices in which men, women and children all had roles to perform in the maintenance of both the herds and the lifestyle that attended herding. Forced sedentarization and the restructuring of labor kept women and children in the villages and sent men, as laborers, into the tundra to care for reindeer which now belonged to the state. The traditional economic pursuits of reindeer breeding, hunting, and fishing are significant in all eight *raiony* (see Map 2)[8], as they were originally intended to provide support for industrial development.

Industrial development in Chukotka can be characterized as intensive because it is focused on specific areas and resources which are non-renewable. The mining of non-ferrous metals is concentrated in Iul'tinskii, Chaunskii, Shmidtovskii, and Bilibinskii *raiony* (Map 3)[9]. A strict regime of labor-intensive mining is conducted almost exclusively by non-Natives concentrated in settlements and towns close to the mines and administrative centers. This population is supported entirely by the importation of European-Russian foods and consumer goods. The majority of Chukotka's infrastructure and transportation network is centered around the industrial areas and associated population centers. Any disruption in the supply lines to mining settlements or in the labor requirements of industry results immediately in food shortages and unemployment. In recent years such disruptions, in addition to the general chaos surrounding the breakup of the Soviet Union, have led to massive out-migrations of non-Native laborers and service personnel.

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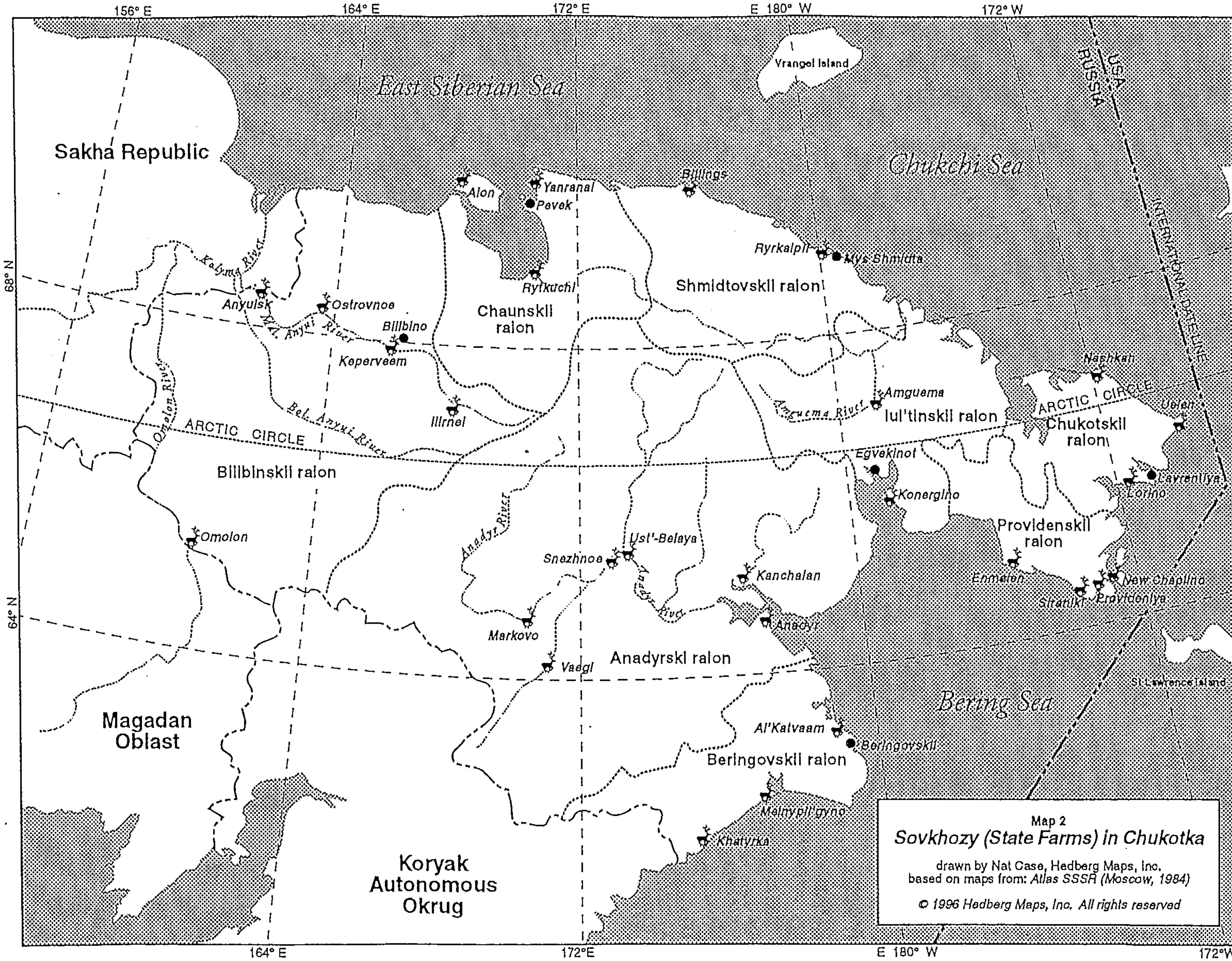
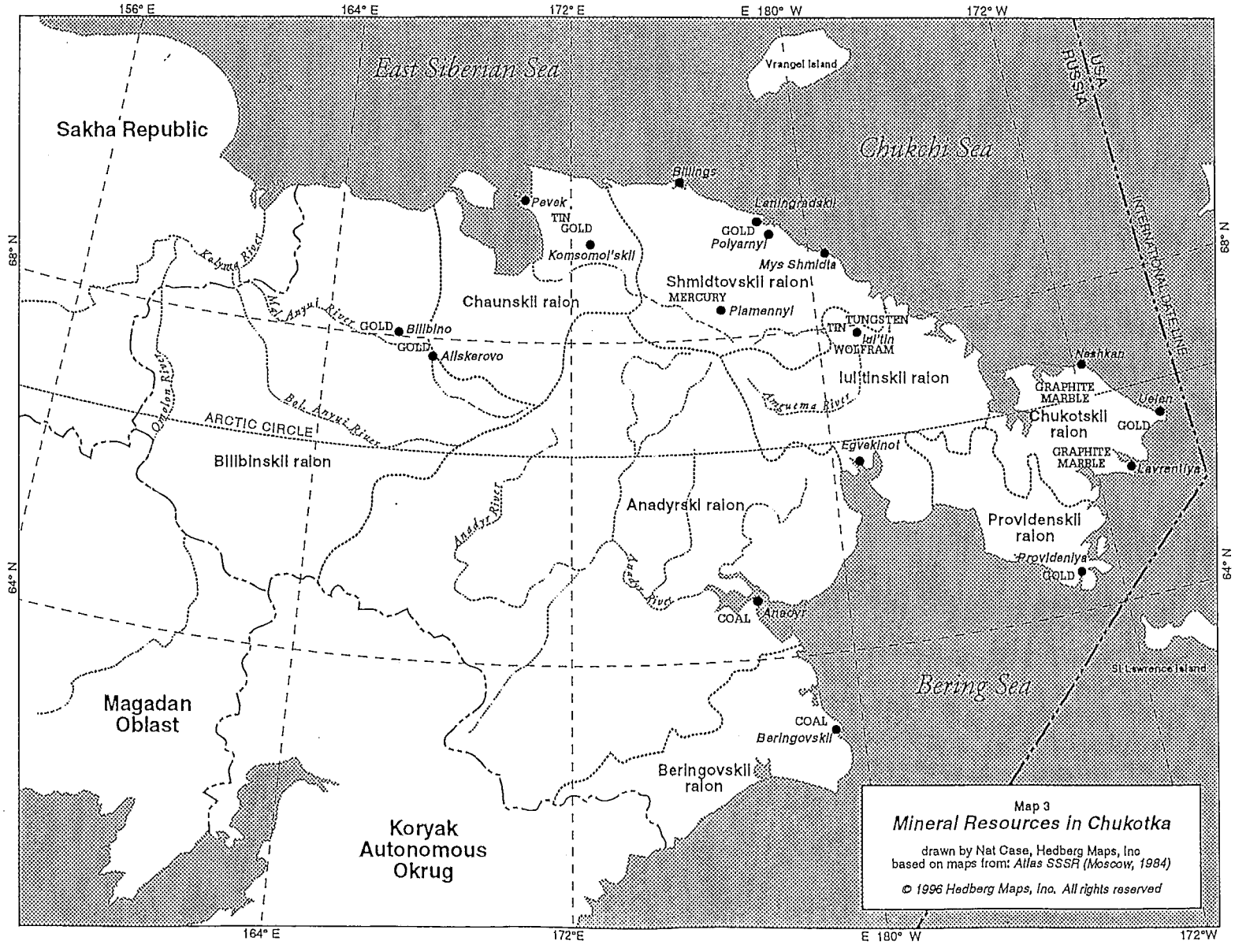
[8]Map data compiled from Leont'ev (1973) and Schindler's field notes. The locations of *sovkhozy* shown on the map are the central administrative points – the *sovkhozy* employ large tracts of land for hunting, herding, and fishing activities. The *sovkhozy* shown were all still in existence in 1990. Since that time there has been some reorganization in accordance with mandated privatization, but land use patterns are still the same.

[9]Map data compiled from Dikov (1989), Tichotsky (1991), and notes of A.A. Mazur, Chairman of the Chukotskii *raion* committee on land reform, collected in 1994 by D.L. Schindler.


156° E
164° E
172° E
E 180° W
172° W
68° N
64° N
East Siberian Sea
Chukchi Sea
Bering Sea
Vrangel Island
St Lawrence Island
USA
RUSSIA
INTERNATIONAL DATE LINE
ARCTIC CIRCLE
Sakha Republic
Magadan Oblast
Koryak Autonomous Okrug
Bilibinskii raion
Chaunskii raion
Shmidtovskii raion
Iul'tinskii raion
Chukotskii raion
Providenskii raion
Anadyrski raion
Beringovskii raion
Kolyma River
Ml. Anyui River
Bel. Anyui River
Omolon River
Anadyr River
Amguema River
Anyuisk
Ostrovnoe
Bilibino
Keperveem
Ilirnei
Omolon
Alon
Yanranai
Pevek
Rytkuchi
Billings
Rytkaipii
Mys Shmidta
Amguema
Egvekinot
Konergino
Neshkan
Uelen
Lavrentiya
Lorino
Enmelen
Sireniki
Providenya
New Chaplino
Ust'-Belaya
Snezhnoe
Markovo
Vaegi
Kanchalan
Anadyr
Al'Katvaam
Beringovskii
Meinypil'gyno
Khatyrka
164° E
172°E
E 180° W
172°W

Map 2
Sovkhozy (State Farms) in Chukotka
drawn by Nat Case, Hedberg Maps, Inc.
based on maps from: *Atlas SSSR (Moscow, 1984)*



Map 3

Mineral Resources in Chukotka

drawn by Nat Case, Hedberg Maps, Inc
based on maps from: *Atlas SSSR (Moscow, 1984)*

5. Population Demographics

5.1 Ethnic Composition of Chukotka

The 1989 census recorded 158,200 people living in the Chukchi Autonomous *Okrug*. Representatives of the northern indigenous groups comprised roughly 10% of the total population at that time (*Chislennost'*...1990). The indigenous population consists primarily of Chukchi and Yupik (Asiatic Eskimo) peoples, although others such as Eveny, Yukagiry, Chuvantsy, and Koryaki are also resident (Figure 3). The Chukchi people who are the titular nationality of the *Okrug* comprise roughly 7.3% of its total population. In Chukotka in January, 1990 73% of the population was located in urban areas and 27% in rural areas (*Narodnoe khozyaistvo*...1990). Most non-Natives live in urban areas.

Nationality	Chukchi Autonomous *Okrug*	Anadyr (*Okrug* Center)	Totals
Chukchi	11914	408	12322
Eveny	1336	82	1418
Eskimosy	1452	62	1514
Koryaki	95	22	117
Chuvantsy	944	152	1096
Itel'meny	17	0	17
Iukagiry	160	10	170
Evenki	54	0	54
Orochi	2	0	2
Dolgany	4	0	4
Mansi	3	0	3
Nentsy	20	0	20
Khanty	4	0	4
Nanaitsy	13	0	13
Nivkhi	3	0	3
Tofalary	1	0	1
Ul'chi	4	0	4
Totals	16026	736	16762

Figure 3. Indigenous Population of Chukotka. [10]

[10] *Chislennost'*...1990.

5.2 Non-Native Population of Chukotka

The majority of people who moved to Chukotka during the Soviet period were Russians (in 1979, 68.9%), who came to work in the mines and various service industries. Ukrainians (14.4%), Belorussians (1.7%), Tatars (1.4%), and members of other ethnic groups have also had a significant presence in the *Okrug*.[11] Non-Native people settled in workers' villages established close to mines and industries or took up residence in administrative centers (Nekrasov 1974). What originally brought the majority of these people to Chukotka (and to the Far North in general) were primarily wages and retirement benefits. In the Chukchi Autonomous *Okrug* wages were increased by 10% for every six months of work, up to a maximum of 10 times. This resulted in a wage double that of the mid-regions of the USSR. The goal of this policy was to provide an incentive for newcomers to stay in the North and make their homes there, although there seems to have been little success in establishing a permanent non-indigenous population. A second type of wage differential also existed, which was regional and varied according to living conditions and severity of environment (Shabad 1983). Chukotka had the highest differential of this type. The "newcomers" often worked in the North only for a few years-- long enough to save some money-- and then returned to their homes in more hospitable climes. In Chukotka during the Soviet period, this turnover rate was reported to be 30-40% per year (Leont'ev 1973). In post-Soviet Russia incentives continue to be important for attracting these people to Chukotka. In addition to financial lures, however, workers have begun to demand better living and working conditions, i.e. more investment by the state in local infrastructure.

Today the non-indigenous population is overwhelmingly Russian, although Ukrainian and other non-indigenous nationalities are still present in significant numbers. The relative percentage of non-Native to Native residents has changed dramatically (although non-Natives remain the majority population) in some parts of Chukotka in the past several years, as thousands of non-Natives return to their homes in the central regions of the country and to the new countries which

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[11]The figures for percentage of the *Okrug* population are taken from the *Demograficheskii entsiklopedicheskii slovar'* 1985: 526.

stand in place of the fifteen former republics. Whereas at the beginning of 1991 there were 153,000 people living in Chukotka, by the beginning of 1994 there were only 110,000 (*Krainii Sever* 18 January 1994). In a ten-month period in 1992, 47,000 people left Magadan *Oblast*; more than 20,000 left the Chukchi Autonomous *Okrug*, and within the *Okrug*, Bilibinskii *raion* saw its population decrease by more than 4,000, with many more people waiting for containers[12] so that they too could leave the North (*Sovetskaya Chukotka* 21 January 1993). In the first half of 1993 more than 6000 people left Anadyrskii *raion*, citing declining living conditions. Most of those leaving are "highly qualified specialists" from the central regions of Russia, Ukraine, and Belarus (RA Report 1994 (16):137). Magadan *Oblast* as a whole has experienced substantial outflow of population: in the past five years roughly 95,000 people, or 17% of the population has left. Most of these people (68%) are of working age which leaves behind many non-Native pensioners, invalids, veterans who choose to stay or who either lack the financial means to leave and/or have nowhere to go in the central regions of the country, and the Native people (RA Report 1993 [15]).

5.3 Morbidity and Mortality

Modern demographic processes among Chukotka's Native peoples clearly reflect the rapid social and economic changes which have occurred in this region (and elsewhere in the Soviet North) during the twentieth century. Such changes have included forced resettlement, collectivization, sedentarization, and the introduction of education and western medical practices (Chichlo 1981a, 1988; Robert-Lamblin 1993; Schindler 1991; Vakhtin 1993). The following discussion is primarily taken from recent research on demographic process and social change in Providenskii *raion* conducted by Alexander Pika, Lydia Terentyeva and Dmitri Bogoyavlensky (1993).

Archival materials from Chukotka show "catastrophically high death rates" for Native people in Chukotka during the years 1939-1941 (Pika et al. 1993:65). This three year period falls into a larger time frame (late 1930s to early 1950s) characterized by hunger and epidemics which

[12]"Containers" are essentially large metal boxes used to ship goods.

significantly affected the demographic structure of the Native population. Data from the 1950s and early 1960s show population growth, but this increase almost ended in the late 1960s when the small generation of women who were born (and who survived) in the 1940s came of childbearing age and produced a correspondingly small number of children. Pika and his co-workers (1993) attribute declining birth rates (see Figure 4) in the 1970s to ethnic assimilation, acculturation, and modernization of lifestyles which included the practice of birth control with modern contraceptives and abortion.

Beginning in the 1980s the birth rate

> increased dramatically as a result of the structural change in the generations born during the 1960s who have entered the childbearing years. In the 1980s the USSR government adopted incentives to foster fertility and provide State assistance to families with children in the form of small monthly payments. This action has produced clear results. One result was that the highest birth rates on record were recorded in 1986-1988. But since 1989 the birth rate has decreased. The basic [factors that have] influenced the decrease in the fertility rate [were] low marriage rates and the spread of family planning practices (Pika et al. 1993:67).

Throughout the 1960s the net death rate among Native peoples decreased. Infant mortality declined; middle-age deaths increased. Death from infectious diseases, which was the primary cause of death prior to the 1960s was replaced at the beginning of the 1970s by death from trauma and poisoning. Overall, the trend toward decreasing mortality seen in the 1960s was reversed in the years 1969-1974, and then dropped again in the 1980s, with minimum death rates occurring between 1986-1988 (see also Figure 4).

> The decrease of violent deaths, associated with alcohol abuse and alcoholism, occurred partially because of an anti-alcohol campaign that was waged by the state. In 1980-1984 traumas and poisoning caused more than 40 percent of all deaths, while in 1985-1989 they accounted for less than 3 percent. A considerable increase in average life expectancy occurs during the same period. Recently, however, the share of deaths caused by traumas (homicides and suicides included) and the crude death rate, in general, has increased. The reason for this is primarily the termination of the abortive anti-alcohol State policy (the campaign was waged by administrative methods, harsh propaganda and coercion only). Presumably it can also be related to the general deterioration of the economic situation and health care in the region. The current decade (the 1990s) is likely to be characterized by a further decline in birth rates with some increase in the death rate among Natives in Chukotka and Providenskii district (Pika et al. 1993:68-69).

Year	1970-1974	1975-1979	1980-1984	1985-1989	1990-1992
Chukchi A.O.	5.4	4.8	4.6	3.4	4.6
Chukchi	21.2	21.2	18.9	12.7	12.7
Eveny	16.9	18.8	12.7	8.3	5.6
Eskimosy	17.0	16.9	14.0	8.7	13.1

Figure 4. Death rates in Chukotka (per 1000 population).[13]

Birth rates in Chukotka are declining, as illustrated in Figure 5. More recent data vary depending on sources. The Chukotka press reported a birth rate of 13.8 per 1000 population for all of Chukotka in 1993 (*Krainii Sever* , 31 May 1994: 1). Finkler (1995: 240) collected data from Chukotka's Public Health administration and reports a birth rate of 9.9 per 1000 population in Chukotka in 1993, "with and even greater decline reported for the aborigianl population." Infant mortality in Chukotka is illustrated in Figure 6. In Magadan *Oblast* as a whole birth rates have dropped (in 1986 – 17.8 births per thousand population; in 1991– 12.3 births; in 1992 – 10.0 births). Mortality rates increased by 18% in 1992; 4.1 per thousand in 1986; 5.4 in 1991; and 6.6 in 1992 (RA Report 1993 [15]).

Year	1970-1974	1975-1979	1980-1984	1985-1989	1990-1992
Chukchi A.O.	17.3	16.3	17.0	16.5	13.2
Chukchi	25.1	28.2	31.8	32.6	27.6
Eveny	24.0	37.7	33.9	32.8	30.0
Eskimosy	28.0	29.0	26.1	23.4	22.3

Figure 5. Birth Rates in Chukotka (per 1000 population).[14]

The entire demographic structure of the immigrant population has historically been determined by the migration process. As the able-bodied population (defined by the state as 16-60 years for men and 16-55 years for women) attained retirement age, they tended to leave the *Okrug* and were replaced by young people aged 20-25 and older, generally without families. Birth and death rates for the newcomer population are generally too high in terms of births and too low in

[13]Source: Alexander Pika, personal communication, 1995.
[14]Source: Alexander Pika, personal communication. 1995.

Year	1970-1974	1975-1979	1980-1984	1985-1989	1990-1992
Chukchi A.O.	29.1	31.0	27.1	18.2	22.0
Chukchi	91.9	85.0	78.5	41.3	45.1
Eveny	70.3	64.0	40.4	14.1	23.3
Eskimosy	78.3	54.9	45.7	35.9	20.0

Figure 6. Infant Death Rates in Chukotka (per 1000 population).[15]

terms of deaths due to the skewed age structure of this population which favors individuals between the ages of 20-40 (Pika et al. 1993:64). This general pattern of migration continues to determine the demographic structure of Chukotka although, as noted above, there has been a net loss on non-Natives in recent years.

In contrast the demographic structure of the Native population has been determined by factors of fertility and mortality, and to a lesser extent ethnic assimilation. Mortality among Native peoples in Chukotka is higher than among newcomers, as confirmed by life expectancy data for Magadan *Oblast* (including Chukotka) in Figure 7. The life expectancy of Northern peoples in the former Soviet Union has been reported at 40-46 years (Levshin 1988). On average this is 16-18 years below that of the non-indigenous population (Sangi 1988). Between 1970 and 1980, half of the deaths of the indigenous northern population were due to domestic and industrial accidents, murder, and suicide. This is 3-4 times greater than the average for the Soviet Union (Pika and Prokhorov 1988).

Average Life Expectancy (years)	1958-59	1969-70	1978-79	1988-89	RSFSR/Russian population, 1989
Male and Female	43	44	45	56	69.7
Male	40	42	43	52	64.2
Female	46	46	47	60	74.5

Figure 7. Life Expectancy among Native Peoples in Magadan *Oblast*..[16]

[15]Source: Alexander Pika, personal communication 1995.
[16]Table adapted from Pika, Terentyeva, and Bogoyavlensky 1993: 68.

Long-term demographic tendencies among the indigenous and immigrant populations are relatively the same, with periodic fluctuations in birth and death rates. The parameters of those rates, however, vary considerably and are significantly affected by the age/sex structures of the population. A high proportion of youth and low proportion of elderly characterize both the Chukchi and Yupik populations of Chukotka. The 1989 census reported about 40% of this population to be less than 15 years old. The percentage of elderly is small (for example in Providenskii *raion* only 5%) and mortality is high. "In contrast, in Russia one out of eight people who is 60 years or older is over the age of 80. And among the Chukchi and Yupik, one person in 30 over the age of 60 exceeds the age of 80" (Pika et al. 1993:63).

On the whole, Native northerners are treated for diseases of the ears, nose, and throat, heart, liver, and kidneys, and other ailments far more frequently than are members of the non-indigenous population and the incidence of death from these conditions is also higher. Tuberculosis is still perhaps the most serious disease in Chukotka (*Sovetskaya Chukotka*, 9 January 1992). Failure to correctly diagnose tuberculosis and diagnoses which are made too late to help the individual result in a high death rate from this disease. More specifically in Chukotka, there has been

> an upsurge in diseases of blood circulation and sense organs, including chronic otitis, laryngitis and nasopharyngitis. Myopia is widespread. Compared to other districts and ethnic groups of native populations a higher rate of morbidity and death due to cancer is recorded among the indigenous population of Chukotka. There has also been an increase in alcoholism, mental disorders and suicides. Avitaminosis and iron deficiency anemia have recently become widespread (Pika et al. 1993:73-74).

6. Political Geography

Administratively, the Chukchi Autonomous *Okrug* was part of Magadan *Oblast* from 1953 until 1992 and its governmental structures as well as economy have been intimately tied to the larger concerns of the *Oblast*. Statistical materials often reflect this intimacy in that they frequently fail to distinguish Chukotka from the whole of Magadan *Oblast*. The advent of *glasnost* brought a wave of "independence" movements to the Soviet Union: the most well-know examples lead to

complete separation and the establishment of independent states, as in the Baltics. Less well-known in the west however, were a whole series of declarations made by *okrugy* and *oblasti* [17] intent on raising the status of their territories within the Russian federation. In 1990 the Chukchi Autonomous *Okrug* declared itself to be an *Avtonomnaya respublika* (Autonomous Republic). Moscow took little notice of this declaration, but Magadan reacted strongly to Chukotka's attempted defection from the *Oblast*. Although republican status was not granted to Chukotka, it did succeed in severing its subordinate relationship with Magadan *Oblast*, and on June 17, 1992 Russian President Boris Yeltsin signed a decree (Russian Law No. 3056-1) "On the Chukotka Autonomous *Okrug*'s direct membership in the Russian Federation" (FBIS Soviet 92/133, 10 July 1992,33).[18] Magadan *Oblast* appealed repeatedly to the Moscow government to repeal this decision to no avail and exerted pressure on the *Okrug* government to try and force economic concessions. Tensions between the two regions have escalated in recent years as increasing layers of bureaucracy are implemented to restrict the flow of people and goods between the two areas.

The Chukchi Autonomous *Okrug* is divided into eight *raiony*: Bilibinskii, Chukotskii, Chaunskii, Shmidtovskii, Iul'tinskii, Providenskii, Anadyrskii, and Beringovskii. *Raion* boundaries are purely administrative and do not reflect any sociocultural or economic boundaries. Each of these regions has an administrative center, but only two of these-- Anadyr and Pevek-- are ranked as "cities" (*goroda*) (Figure 8).

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[17] *Okrugy* and *oblasti* are the plural forms of *okrug* and *oblast'*.

18 FBIS- Foreign Broadcast Information Service, Reports on the Soviet [or former Soviet] Union.

Raion	Administrative Center	*Sel'sovety*	Population
Providenskii	Provideniya	6	9,900
Iul'tinskii	Egvekinot	5	15,500
Shmidtovskii	Mys Shmidta	3	15,700
Chukotskii	Lavrentiya	6	7,100
Chaunskii	Pevek	6	31,100
Bilibinskii	Bilibino	8	29,200
Beringovskii	Nagornyi	3	9,200
Anadyrskii	Anadyr	8	40,500

Figure 8. Administrative Divisions of the Chukchi Autonomous *Okrug*.[19]

Until recently rural soviets (*sel'sovety*) typically encompassed several villages and were the smallest territorial/administrative units in the Soviet/Russian system. City soviets (*gorsovety*) fulfilled similar functions in urban areas. On October 9, 1993 President Yeltsin issued a decree "On reform of representative power bodies and local self-government bodies in the Russian Federation" which dissolved all *sovety* (rural, city, etc.) and transferred all of their functions to the local administrations. Aleksandr Nazarov is the head of administration in the Chukotka Autonomous *Okrug*. He has suggested further administrative reforms for the *Okrug*, which include the possibility of reorganizing the eight existing *raiony* into five, or even 3 *raiony*, and the abolition of all their executive functions (RA Report 1994 [16]). Nazarov made a brief trip to several Native villages in 1994, at which time he also suggested the possibility of consolidating smaller villages into larger settlements-- a suggestion reminiscent of the forced relocation policies of the Soviet state. In the meantime, however, experimentation in *raion*, city, and village government is proceeding slowly. In July 1994, for example, the city administration of Pevek, an urban industrial center in Chaunskii *raion* and the Chaunskii *raion* administration merged.

19 Figures were collected in Anadyr and are current as of 6 January 1989.

The village-level political economy in Chukotka has its origins in the Soviet policies of resettlement and collectivization. A basic overview of these policies, presented below, is important for understanding the current political and economic situation in Chukotka.

6.1 Collectivization and Resettlement

Collectivization in Chukotka began in the 1920s with the creation of new forms of organized labor and later entailed the collectivization of property. By the 1930s and early 1940s there were numerous small consumers' cooperatives, production unions (*ob"edinenie*), associations (*tovarishchestva*), artels,[20] and several *kolkhozy* (collective farms) and *sovkhozy* (state farms) in Chukotka. These early forms of collectivization reorganized trade, seasonal hunting groups, women's sewing (artels), and reindeer herding along "socialist" principles with the goals of distributing the productive forces of the Native peoples in a more "rational" manner, and demonstrating "the superiority of collective work over individual enterprises" (Vdovin 1973:44).

The Soviet state viewed the small scale, dispersed organization, and single focus of the activities as a weakness of the system and again ordered their reorganization and "strengthening." "Single-focus" traditional economies, such as reindeer breeding or sea-mammal hunting were considered inherently unstable. The process of reorganization basically entailed the liquidation of small national villages, the relocation of their inhabitants to larger, multi-ethnic settlements (integrating Chukchi and Eskimo peoples), and the consolidation first of artels, associations, and other types of collective enterprises into *kolkhozy* and later the transformation of *kolkhozy* into *sovkhozy*. In this way, it was thought, the Soviet state could establish diversified economic bases and centralized settlements with modern housing, schools, and hospitals. Settlements with multiple branches of "traditional" subsistence activities would be stronger because they didn't rely on one resource and the marketability of local products would improve. The importation of Russian goods was expected to raise the standard of living in Native villages. Larger settlements would increase

20 Artels were informal associations, usually functioning as seasonal labor groups (Sergeev 1955).

the efficiency of providing goods and services to the people and would also speed the development of new branches of the economy providing jobs for women. The nomadic lifestyle of the reindeer breeders would come to an end – they would have houses in town and their children would attend the schools there (Chichlo 1981a, 1981b; Gurvich 1971; Vdovin 1973).

All of these "development" plans relied implicitly on the establishment of consistently reliable transportation via the Northern Sea Route. These plans also explicitly condemned traditional foods and lifestyles as "unhealthy" and "primitive." This view of the indigenous economy failed to see other aspects of subsistence strategies-- for example, plant foods gathered by women. Similarly, trade between coastal and inland groups was seen as exploitative, not adaptive and seasonal shifts in subsistence activities and subsidiary activities such as fishing were viewed as evidence of failure in the indigenous economy. In Chukotka, this phase of reorganization began in the 1940s, with the consolidation of production associations into *kolkhozy* and *sovkhozy* and continued throughout the 1950s and 1960s as *kolkhozy* and *sovkhozy* were consolidated into increasingly larger enterprises. Whereas in the 1930s and early 1940s there were 97 associations, *kolkhozy* and *sovkhozy* in Chukotka – by 1985 these had all been consolidated into 28 *sovkhozy*, or state farms (Leont'ev 1973).

7. Ethnology

The ethnic composition of Chukotka has already been described in terms of statistical data. The First Nation peoples who today call Chukotka home, and whose ancestors first came to Chukotka thousands of years ago are very briefly described below in terms of their general cultural features as recorded at the turn of the twentieth century. Although the ethnographic description below is written primarily in the past tense, many of the traditions and beliefs of the Yupik and Chukchi peoples are still important in their lives and lifestyles today and they consider the revival of these traditions as essential for their survival. More detailed and extensive ethnographic information can be found in the works of authors referenced in the text.

7.1 Chukchi.

The Chukchi are one of the paleo-Asiatic groups of northeastern Asia and their language is classified as a member of the Chukotsko-Kamchatskii group of paleo-Asiatic languages (*Demograficheskii*...1985:526). Their population is concentrated in the Chukchi Autonomous *Okrug*, although some are found in the Sakha Republic and the Koryak Autonomous *Okrug*. Population figures for the Chukchi people in the Soviet Union are as follows: 12,332 (1926); 11,727 (1959); 13,597 (1970); 14,000 (1979) (Wixman 1985). The 1989 census recorded 15,184 Chukchi in Chukotka (*Chislennost'*...1990).[21]

In terms of religion, the Chukchi were shamanist-animist, as were many other Siberian peoples. Conversion to Christianity took place only near the Russian villages, and even then, usually only meant the adoption of some Christian rituals (Antropova and Kuznetsova 1964). The culture and economy of the Chukchi have historically been divided into two groups: those sedentary coastal Chukchi (*ankal'yt*), who practiced primarily sea mammal hunting, and nomadic tundra Chukchi (*chavchyvat*) who were reindeer-breeders. These two groups were further divided into eight territorial groups. The coastal and nomadic groups were linked by several factors: trade, language, mixed economies, and could sometimes recall ancient kin ties with each other (Krupnik 1993; Leont'ev 1973).

Lyg"oravetl"an ("real man" or "real people") is a general ethnonym for the Chukchi, although as a rule they called each other by settlement or place names where they lived or migrated. *Luoravetlan* (the Russian spelling) was the designation chosen by the Soviets for the Chukchi (in 1929-30 when such designations were first being made for the northern peoples), and appears in the literature of the 1930s and 1940s, but all official documents employ the term *Chukcha* (feminine, *Chukchanka*); only in the former Yakut ASSR (Sakha Republic) was the designation *Luoravetlan* used in official documents. The Chukchi of Anadyrskii, Beringovskii, Iul'tinskii,

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21Population figures quite often vary from source to source in the Russian literature. For example, the size of the Chukchi and Yup'ik populations listed in *Osnovnye pokazateli* (1990) and *Chislennost'*...(1990), both cited in this report, are not the same although both documents cite the census as their source of data.

Providenskii, Chukotskii and some in Chaunskii *raiony* called themselves by the old tradition *Lyg"oravetl"an.* The Chukchi of Bilibinskii *raion* and some in Chaunskii *raion* called themselves *Chugchit.* The reindeer-herding Chukchi also had more specific, seasonal names, such as *Ramagl'at* - "went to the coast in the summer." In Anadyrskii *raion*, herders who had lost their reindeer and resettled on the shores of rivers and lakes were called *Elkel'yt.* In coastal settlements there were even more specific names for Chukchi groups, e.g. in Uelen there were *Tapkaral'yt-* "those who live on the spit" and *Rynonral't* – "those living in the center." Each name of a group of inhabitants of a settlement united relatives. Many of these names were said to gradually disappear as the differences between coastal and reindeer Chukchi decreased and economic activities were expanded. The settled Chukchi did not use traditional territorial names, but instead used the name of the place from which they have come to the new settlement (Leont'ev 1973:29).

The basic socioeconomic unit of the coastal Chukchi at the beginning the 20th century was the "baydar party" - a group of between three and five related families united for the purpose of communal hunting. Baydars[22] were generally owned by individuals, and the animals caught by the group divided the catch according to set rules. Although the baydar party usually consisted of relatives, it was extended as needed to include non-related men who lived in the village. In general, villages were composed of both related and unrelated families. The coastal Chukchi focused their economic activities on hunting seals, walrus, and whales. Seals were hunted individually, but walrus and whale required the efforts of the baydar party. Sea mammal hunting provided the basic diet of the coastal Chukchi and was also the primary source of materials for construction of dwellings and baydars, clothing, dog-sled harnesses, dog food, etc. Coastal groups used dog sleds as their primary means of transportation. Depending on the availability of resources, coastal Chukchi villages tended to be somewhat larger than those of reindeer-breeding Chukchi (Antropova and Kuznetsova 1964).

22 A baydar is a leather boat, made from walrus skins stretched over a wooden frame. The size of baydars varied, from one-man vessels to those able to carry between 20 and 30 people (Antropova and Kuznetsova 1964).

The basic economic unit of the reindeer Chukchi was an encampment, consisting of two to five families (15-30 individuals), living in several yarangas and herding their deer in common. Reindeer were used in harness to pull sleds, and as pack animals, but were not ridden. Territorial groups were formed from 15-20 encampments and recognized reciprocal obligations and responsibilities among themselves. Hunting wild animals (mountain sheep and wild reindeer) occasionally supplemented the diets of both coastal and reindeer Chukchi, and birds were sometimes hunted. Women and children gathered wild plants (willow leaf, wild sorrel) and roots for consumption (Antropova and Kuznetsova 1964; Leont'ev 1973).

7.2 Yupik (Yupigyt or Asiatic Eskimo)[23]

The advent of Soviet power found Yupik peoples living on Ratmanova Island, in the settlements of Naukan, Chaplino, Kivak, (Provideniya), Plover, Vuuten (Sireniki) and Uel'kal' (Leont'ev 1973). The 1979 census reported the size of the Yupik population in Chukotka at 1278 individuals, while the 1989 census reported 1,719 Yupik in Chukotka (*Chislennost'*...1984; *Chislennost'*...1990). Most Yupik live in Providenskii and Chukotskii *raiony*. Population figures for the entire Yupik population in the Soviet Union are as follows 1,293 (1926); 1,118 (1959); 1,308 (1970); 1510 (1979) (Wixman 1985).

The ethnonym of Yupik people in Russia is *Yugyt*, or *Yupigyt*, although in the Soviet and pre-Revolutionary literature they have been called by a variety of names, and were occasionally confused with the coastal Chukchi (Menovshchikov 1959, 1964). Linguistically, the Yupik are classified as part of the paleo-Asiatic language group. At the present time two strongly divergent dialects (Chaplinskii and Naukanskii) are recognized, as well as a third language (Sirenikovskii). Both languages belong to the Yupik group, within which they form a special Siberian subgroup (Krupnik and Chlenov 1979). The religion of the Yupik is animistic in form.

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23 The designation of "Yupik" (a linguistic classificatory group) is employed in this report simply for convenience in comparisons with related groups in North America. The Soviet/Russian literature employs the term "Asiatic Eskimo." At present there does not appear to be concensus among the Yupik peoples of Russia as to a common self-designation.

The Yupik can be divided into two territorial groups: northern and southern.[24] The northern group is further divided into two "tribes"[25] and each tribe into several "clans." The southern group is divided into four tribes, within which clan organizations can also be established. In addition to these categories, "tribal groups" may be defined: these were small groups which neither belonged to any tribe nor formed a tribe themselves. This classification is based on fieldwork conducted between 1971-1977 by I. I. Krupnik and M. A. Chlenov and describes the social organization of the Yupik, as it existed at the end of the 19th century. Although all of these divisions are not intact today, some elements are visible, for example, some tribes remain intact within a single settlement in Chukotka.

Yupik relations with the Tsarist regime were very similar to those of the Chukchi, although the Yupik entered into the sphere of Russian economic and political concerns somewhat later than the Chukchi. As whale hunting began to decline in the second half of the 19th century, the Yupik began to hunt more walrus and seals, continuing to participate in trade with both Russians and Americans, and acquiring firearms and whaleboats, as the commodity value of these animals increased.[26] With continuing involvement in trade relations (which also included the Chukchi as trading partners) social stratification among the Yupik appeared just as it had among the Chukchi -- middlemen appeared and some hunters controlled the means of production, while others did not (Menovshchikov 1964).

The Yupik settlements were similar to those of the coastal Chukchi. Villages ranged from 15-40 yarangas (60-300 individuals). The baydar party was the basic economic organizing principle among the Yupik as well as among the Chukchi, and members of the baydar party generally lived close together within the settlement. The members of the party were usually

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24Beginning at the end of the 19th century, and continuing today, Soviet researchers (e.g. Leont'ev 1973;) traditionally divided the Asiatic Eskimo into three basic groups, in relation to Eskimo dialects and languages : 1) Chaplinskii; 2) Naukanskii; and 3) Sirenikovskii.

25"Tribe" as used here refers to a "specific stadial form of ethnic community, characterized primarily by such features as the ethnic self-awareness of its members, a community of territory, of language, etc." (Krupnik and Chlenov 1979:20).

26In addition to acquiring American goods, many of the Yup'ik men engaged directly in trade with the Americans began to learn the English language. By the 1970s, knowledge of English had disappeared (Krupnik and Chlenov 1979).

relatives of the baydar owner, who acquired the boat either through inheritance or by manufacturing it himself (with the aid of relatives). Other subsistence activities included fishing, birding, collecting plant foods (including seaweed) and shellfish. Reindeer and mountain sheep were hunted. The hunting of fur-bearing animals became more important as the commodity value of furs increased (Leont'ev 1973; Menovshchikov 1964).

8. The Regional Division of Labor

Following World War II, the development of Chukotka's natural resources -- gold, tin, tungsten, oil, gas, and coal -- took precedence over the slow process of gradually "modernizing" traditional indigenous economies and lifestyles. With the growth of natural resource development and the influx of administrators and laborers from outside the *Okrug* came an increasingly clear segregation which is both geographical and socioeconomic. In Chukotka today, industry and service occupations are held predominantly by non-indigenous personnel located in more urban settings while rural, agricultural enterprises are the domain of the indigenous peoples, under non-indigenous supervision.

Hunting and reindeer herding in Chukotka have gradually shifted from their original role as support structures for industrial development to economies which are isolated from both the central economy of Russia and the industrialized periphery. This ethnic stratification which segregates the industrialized groups (Russians, Ukrainians and others) from the indigenous population is maintained through unequal access to goods, services, jobs, and significantly higher wages. The low status of the indigenous population is further enhanced by discriminatory practices related to language and lifestyle.

Extensive and intensive land-use strategies as discussed above have their own requirements in terms of personnel, training, appropriate technology, and capital investment. Most Native people in Chukotka today are directly or indirectly dependent on traditional economic activities. The knowledge required to perform within the traditional spheres, however, is inadequately passed from one generation to the next. This fact has become an important item on the Native rights

agenda and attempts to overcome deficiencies in education and practical experience are being addressed, although slowly. An additional problem is the lack of appropriate technology and the control of technology by the *sovkhozy*, which still regulate most traditional economic activities in Chukotka. Collectivization entailed not only the confiscation of reindeer herds, but also the equipment used in herding, hunting, and fishing. Individuals were left with only their skills and knowledge of the northern environment as they went to work for the state as laborers. Today hunting and herding activities are carried out in all eight *raiony*, and the majority of Native people are employed and supported directly or indirectly through these and subsidiary activities such as fur farming. Most supervisory and administrative positions within the traditional branches of the economy, such as that of *sovkhoz* chairman, continue to be held by non-Natives.

Industrial development and labor difficulties in the Far North have occupied a significant number of scholars and government officials throughout the Soviet period as attempts to both utilize existing potential (the Native peoples) and to develop further potential (imported labor) have met with limited success. Although industry and transportation in Chukotka have been developed by labor brought in from other parts of the former Soviet Union, the financial incentive programs noted earlier have failed to make this a permanent work force. The indigenous population was too small, and for the most part, inadequately trained for many jobs in either industry or the service fields. Forced labor no doubt played an important role in industrial development, but was also inadequate (Swearingen 1987; Zone...1988).

The lack of mechanization in mining, gas production, and other industries resulted in the need for a significant amount of manual labor, which even within the centralized command economy of the former Soviet Union, was very expensive and inefficient. The high cost of labor was directly reflected in the cost of housing and other non-industrial types of construction, and in the development of community services (Nekrasov 1974), and usually resulted in the general absence of such facilities. Economic reforms in Russia today have not yet changed any of these facts. Living conditions today are generally poor, as are associated social services and supplies of

food and other consumer goods although administrative centers are relatively well-provisioned in comparison to small national villages.

The primary facets of Chukotka's economy are briefly described below. In some cases, it is difficult to define an activity as either "traditional" or "industrial," since one of the goals of the socialist state was to modernize traditional branches of the indigenous economy along industrial lines with the introduction of "modern" labor practices and technology. For example, fishing is an important part of village-level economics where it is carried out by both individuals and labor brigades (Native and non-Native). It is also an important industrial activity conducted on government ships with non-Native crews. Data distinguishing various levels of fishing activity is not readily available. Fur farming was introduced by the state to broaden the indigenous economy and provide jobs for Native women. Although it is an important source of employment and cash income for Native people today they do not consider it to be a part of their traditional economy. On the other hand, reindeer herding and gold mining are more easily distinguished as "traditional" and "industrial," with their respective Native and non-Native labor forces.

8.1 Reindeer Breeding

Today reindeer breeding remains the primary activity on *sovkhozy* in Chukotka. Figure 9 illustrates the size of the reindeer herd in Chukotka as a whole, distinguishing only between the total number of domestic deer in Chukotka (including deer held by private individuals) and deer held by *sovkhozy* (i.e. in the collectivized economy). With the continued development of the extractive industries in the North (gas, oil, minerals, etc.) there has been an overall decline in agricultural production (grain, beef, reindeer, etc.). Some of this decline, especially in the case of reindeer production is directly related to the interference of development projects, such as oil and gas pipelines and mining activities with the pasturage requirements of reindeer (Dikov 1989; Rostankowskii 1983; Sangi 1988).

Year	1980	1985	1988	1989
Number of Reindeer in All Categories of the Economy	565,500	484,300	508,400	499,000
Number of Reindeer in Collectivized Economy	542,500	464,500	485,900	475,100

Figure 9. Domestic Reindeer in Chukotka (End of year figures).[27]

At one time during the Soviet period reindeer provided over 25% of the locally produced meat in the North as a whole, and 65% of the meat for Magadan *Oblast* (Dienes 1987).[28] It is unclear what these percentages might be today, but in some parts of the North reindeer meat has clearly returned as a staple in the diet because other meat resources are unavailable; in still other areas venison has no doubt declined in local diets due to herd losses and high transportation costs involved in its production. Significant herd losses have been reported throughout Chukotka over the past five years. In 1989 there were 485,000 reindeer in the *sovkhozy*; [29] over the course of three years the herds have decreased by roughly 100,000 deer to a total of 391,000 reindeer on January 1, 1993. In the *Okrug* as a whole there were between 335,000-345,000 reindeer on January 1, 1994 (*Krainii Sever*, 18 January 1994). Figure 10 provides an illustration of the volume of venison produced in Chukotka, as well as the number of reindeer lost to predation, illness, starvation, etc.

27*Osnovnye pokazateli*...1990: 31.
28Dienes' figure of 65% for Magadan *Oblast* includes Chukotka.
29This figure of 485,000 *sovkhoz* reindeer for 1989 obviously differs from the number of reindeer cited in Figure 6. The difference is most likely due to the imprecision (and frequent obfuscation) of data regarding herd sizes. For example, in 1994 the author inquired among both administrators and herders about the herd size of one *sovkhoz* and received different answers (varying by as many as 2,000 reindeer) from everyone asked. Inconsistencies in reporting at the local level can be expected to significantly amplify problems in data compiled at the regional or district level. Although exact numbers may differ, the general trends in herd size are accurate and reflect both the rapid changes instituted in the conduct of reindeer herding and the role of herding in the larger economy.

Year	Head of Reindeer	State Purchases of Reindeer Meat (tons)	Deer losses (head)
1975	530,467	8428	82,220
1976	546,937	9219	80,074
1977	557,492	9163	90,816
1978	565,216	8795.1	96,215
1979	543,614	9585.6	87,607
1980	540,206	8829.3	101,250
1981	542,490	9139,7	92,709
1982	516,032	8141.7	121,652
1983	519,475	9865.2	86,031
1984	501,003	9528.4	100,064
1985	464,457	8258.9	129,894

Figure 10. Reindeer meat production in Chukotka.[30]

An important aspect of reindeer herding has been the harvesting of *panty* (velvet antler) for sale primarily to Asian markets. In 1991 Chukotka exported 15 tons of *panty*, sold through intermediaries at a minimum price of $200 per kilogram (*Sovetskaya Chukotka,* 27 February 1992). In the late 1980s and early 1990s the sale of *panty* was seen as having the potential to save traditional economies with infusions of cash to modernize facilities, purchase equipment such as freezers, etc., but in 1992 the market for *panty* collapsed and this aspect of herding activity has declined.

8.2 Fur Farms

Fur farming was seen by the Soviet government as an important means of engaging women in the labor force and expanding the indigenous economy. Hunting continues to bring furs into circulation, but of different types and in lesser amounts than the fur farms. Figure 11 provides data on furs from both caged farming operations and hunting up to 1985. Figure 12 provides more recent figures for this aspect of the economy, but does not distinguish between furs from caged farming operations and furs from hunting activities. In 1991 the *Okrug* produced furs valued at 3 million rubles. Most of these furs went to the fur base in Irkutsk for processing and then are sent on to auctions in Leningrad and London (*Sovetskaya Chukotka,* 27 February 1992).

30 From Dikov 1989: 396.

Year	State purchases of raw furs/pelts (all categories of the economy; 1000 rubles)	All furs (1000 rubles)	Furs from caged animals (1000 rubles)	Fox furs from hunting (head)
1975	1323.7	1302.6	1134.7	3570
1976	1465.2	1437.3	1186.3	5235
1977	1499.1	1471.3	1220.7	5101
1978	1781.2	1751.0	1513.6	4529
1979	1712.7	1681.1	1406.3	5087
1980	1957.9	1927.6	1640.2	5227
1981	2169.0	2142.8	1901.7	4529
1982	2204.8	2164.8	1883.8	3479
1983	2315.1	2235.5	1927.3	3479
1984	2729.5	2672.0	2212.8	5153
1985	2576.8	2424.5	1944.5	3857

Figure 11. Production of Furs in Chukotka.[31]

Year	1980	1985	1988	1989
Production of furs and fur products (in market prices); thousand rubles	na	3591	2051	1923
State purchases of furs; million rubles	1.9	2.4	na	2.7

Figure 12. Fur Production and Sales in Chukotka.[32]

8.3 Fishing

Fishing in Chukotka has been administered by *Okhotskrybvod*, which sets quotas and is responsible for enforcing industry regulations. Research for the fishing industry is carried out by the Pacific Fishery and Oceanographic Research Laboratory within the Ministry of Fishing. Until 1992, Chukotka's fishing quota was included in the quota for Magadan *Oblast* as a whole. Today Chukotka's quota comes directly from Moscow. The *Okrug* has the legal right to sell fish to either foreign or domestic buyers, but the fishing quota itself is not a negotiable commodity (RFE Update 1993, 3[4]:5).[33] The overall catch of fish and other sea products has significantly declined in Chukotka over the past ten years: 7,900 tons in 1980; 3,700 tons in 1985; 7,400 tons in 1988; and

31 From Dikov 1989: 401-402.
32 *Osnovnye pokazateli*...1990: 23,32.
33RFE Update - Radio Free Europe Update.

in 1989 only 200 tons (*Osnovnye pokazatelii*...1990:22). Most commercial fishing in Chukotka is for salmon: approximately 1000 metric tons of salmon are taken each year, the majority of which is taken at the mouth of the Anadyr River as the salmon begin their migration up-river. Under the Soviet system the quota was divided between fishing industry enterprises, *sovkhozy*, Native peoples, cooperatives, and sport fishing. Fishing in the Bering Sea is carried out by ships from the Ministry of Fishing in Vladivostok and does not involve local labor or facilities (Tichotsky 1990).[34]

Some joint venture activity has been reported for the fishing industry in Chukotka, but to date its success is difficult to estimate. In 1990 an agreement was signed between partners in Seattle, Anadyr and Kamchatka whereby the Russians would guarantee quotas and the Americans would provide the necessary expertise in sales and financing; the agreement fell apart in 1992 RA Report 1993[15]:95). Other joint ventures have been announced in the press as well. The impact of commercial fishing in Chukotka has been to reduce fish stocks available for Native fishermen near- or on-shore; these reductions pose serious problems for Native peoples who rely on fish (frozen and otherwise preserved) as an important part of their diet throughout the year.

8.4 Hunting

Marine mammals, fur-bearing land animals, and large game animals are all hunted in Chukotka. Marine mammal hunting is also under the direction of *Okhotskrybvod*. Commercial marine hunting activities can be divided into two groups: large-scale hunting by government ships and; smaller-scale hunts by *sovkhoz* hunters working in brigades or individually. Commercial hunting ships take walrus and seals in the Bering Sea and the Sea of Okhotsk. Most Native hunters are concentrated in Providenskii and Chukotskii *raiony*, thus it is along the coasts of these two areas that most *sovkhoz* hunters work . In 1989 the planned harvest of walrus and seals from

34 Tichotsky (1990) states that "sportfishing is mostly subsistence set-net fishing and a small amount of spin fishing for salmon," and cites Krasnopolskii and Pilyasov (1990). The regulation of individual fishing activity is sporadic at best, and "official" quotas mean little to people who rely on fishing to feed themselves and their families at certain times of the year. As foreign tourists come to fish in Chukotka, quotas may become more important, but supervision is difficult.

government ships was 4,000 walrus and 84,300 seals. The projected harvest of seals and walrus by *sovkhoz* hunters in Providenskii and Chukotskii *raiony* for 1990 was 1800 walrus and 7650 seals, but harvests generally fell short of targets for these years. Until recently gray whales were taken by government ships and delivered to Native villages for processing. Within the past three years the cost of whales from government ships has risen so dramatically that many if not most of the *sovkhozy* engaged in this activity now apply for permits and send their own hunters out after whales (Schindler 1994 field notes; Tichotsky 1990).

Most of the sea mammal catch is used as food for foxes in the *sovkhoz* fox farms. In this sense it is a commercial activity and provides important jobs for Native women who work in the fur farms and for hunters. Hunters generally work in brigades and pay is based on the success of the hunt. In the 1970s it was decided that complexes should be built for the processing of sea mammals to eliminate waste, although there is little evidence that this was done. Current technologies and methods of processing do not allow for the production of high quality fat and the production of the most important food -- a meat/bone mixture (*farsh*) -- for the fur farms is made difficult by the fact that farms often do not have bone grinding equipment.

All other game hunting comes under the direction of *Promokhota*. Animals taken in Chukotka include arctic fox, lynx, wolverine, brown bears, wild reindeer, and moose. Most of this hunting is undertaken by professional hunters who sell their catches (meat and fur) to the government at fixed prices. There are quotas, and seasons for most species, and fines are set for poaching and illegal hunting practices although monitoring these activities is difficult. Licenses are issued to the general public and legislation exists which gives Native hunters year-round subsistence hunting privileges. Such privileges are often more theoretical, than practical, however, given the restrictions on firearm possession and the unavailability of ammunition.

Hunting on land and sea, as conducted by individual hunters and hunting parties, are both important parts of "traditional" Native culture and have great significance for the revival of the traditions and lifestyles of both Chukchi and Yupik peoples. Reindeer herders and sea mammal hunters historically traded the products of their labors with each other, providing important variety

in diet and materials for clothing and shelters. Although Soviet plans for the modernization of Native lifestyles called for the eventual replacement of traditional foodstuffs, clothing, and shelters with "modern" manufactured products, the reindeer herds and sea mammals provide essential food items and traditional clothing has yet to meet its match for warmth and durability in the harsh arctic environment. In today's uncertain economic climate the ability to provide for at least some of your family's needs by hunting and fishing is very important.

8.5 Livestock and Horticulture

Many *sovkhozy* have other branches of agricultural production such as poultry or dairy operations. Secondary economic enterprises are also engaged in livestock raising and horticultural operations. The period 1975-1985 was a period of intensive growth of investment in these areas which resulted in increased numbers of farms, secondary enterprises, and even individual households engaged in these activities (Figure 13). One of the main problems with this aspect of the economy has always been the supply of fodder for animals. A small amount of hay is produced locally on thermokarst meadows, but most feed for livestock has to be shipped in, making the production of meat, dairy products, and eggs very expensive, and unprofitable. Most people, however, consider these products (in fresh, not frozen or powdered form) to be essential to their health and well-being and therefore "profitability" is not considered as an important factor in production. The expectation is that these products must, as a matter of rational necessity, be provided by the government if private enterprises can not fulfill public demand.

Year	Cattle (head)	Poultry (head)	Swine (head)	Milk production (tons)	Eggs (1000 pieces)
1975	1800	46,100	2700	3500	5100
1980	2560	81,359	6282	4372	9235
1981	2718	85,570	8495	4729	9505
1982	3045	65,184	10,223	5056	9988
1983	3235	88,783	10,669	5526	10,460
1984	3366	69,467	10,941	5788	10,293
1985	3546	43,449	11,281	6067	8297
1986	3847	84,800	10,945	na	na
1987	4026	89,400	10,936	na	na
1988	4100	87,500	13,476	na	na
1989	3921	91,800	14,947	na	na

Figure 13. Agricultural Production in Chukotka.[35]

On the whole, very little agricultural production takes place in Chukotka (Figure 14).

Product	1980	1985	1988	1989
Dairy Products (All types, in milk equivalents); thousand tons	4.9	6.5	8.3	7.5
Meat (including category 1 subproducts; not including reindeer meat);. tons	1827	1742	2622	2465

Figure 14. Dairy and Meat Production in Chukotka.[36]

8.6 Mining

Chukotka was part of *Dal'stroi* from the time of *Dal'stroi's* creation in 1931 until its dissolution in 1957, at which time gold mining in Magadan *Oblast* (and Chukotka) came under the direction of the Northeastern Gold Mining Trust, *Severovostokzoloto*.[37] In 1971 *Severovostokzoloto* became a state corporation. Chukotka's mineral wealth was recognized by the Soviet government in the 1920s and included coal, carbon slate, peat, oil, graphite, gold, platinum,

35 Figure taken from Dikov 1989:398; data from *Narodnoe khoziaistvo*...1986: 8.
36 *Osnovnye pokazateli*...1990: 25-26.
37 *Dalstroi* was part of the NKVD (People's Commissariat of Internal Affairs).

polymetals, copper, iron and the *Okrug's* mineral springs (Shishkova 1934). Today natural resource development in Chukotka includes the mining of non-ferrous minerals: gold, tin, tungsten and until recently, mercury. These resources come under the purview of Chukotka *Geolkom.* There are four areas of concentrated mining activity in Chukotka: Bilibino, Iul'tin, Pevek, and Mys Shmidta. Each of these towns connects mines with sea ports (via ice roads and/or riverways, and provides population centers with important social services.

Information on the quantities of minerals extracted is limited, as these data are still regarded as state secrets. Tichotsky (1991) has labored through the materials on this subject and provides a figure of 1.3 million ounces of gold produced in Chukotka in 1985, which he notes is roughly five times the amount of gold produced in Alaska that year. In addition to the combines listed below, (Figure 15) there are also tracer enterprises in Chukotka: Aliskerovo, Leningradskii, Komsomolskii, and Krasnoarmeiskii (Kaser 1983). There are also mines and enterprises which are not listed below and for which very little information beyond their name is known.

Mining and Concentrating Combine	Administrative Center (founding date)	*Raion*	Primary Metal Extracted
Bilibino	Bilibino (1958)	Bilibinskii	gold
Iul'tin	Iul'tin (1954)	Iul'tinskii	tungsten
Komsomolskii	Komsomolskii (1959)	Chaunskii	gold
Pevek	Pevek town (1950; 1967)	Chaunskii	tin
Poliarnyi	Poliarnyi (1973)	Shmidtovskii	gold
East Chukchi	Provideniya	Providenskii	gold

Figure 15. Primary Gold Mining Centers in Chukotka.[38]

Recent years have seen reductions in production resulting from shortages of supplies and fuel. In 1993 the Otrozhnyi mine was behind target production by 29.2%; the Pevek kombinat was behind by 88.6%; and Poliarnyi shut down production in July because it ran out of fuel (RA Report 1994, 16). The labor problems in the mining industry were brought to international attention when miners in the Kuzbass region of Russia (Kuznetsk coal basin) went on strike.

38 From Kaser 1983: 562.

Similar problems such as insufficient or nonexistent pay, poor housing, inadequate health care, etc. exist in Chukotka as well and have been intensified by the continued deterioration of living conditions and the outmigration of thousands of workers.

Coal deposits in the *Okrug* are concentrated in two areas: Anadyr (*Shakhta Anadyrskaya*) and Beringovskii (*Shakhta Beringovskaya*). The coal produced is for consumption in Chukotka, but is insufficient to satisfy local demand. Smaller scale mining for local consumption takes place at Egvekinot in Iul'tinskii *raion*, and near the city of Pevek in Chaunskii *raion*. In 1988 total coal production in Chukotka was roughly 1,139,000 metric tons (Tichotsky 1991). Shipping is a vital aspect of coal distribution in Chukotka. Most coastal villages do not have docking facilities, thus in many cases coal is transferred from ships onto barges, which then bring the coal to shore where it is offloaded directly onto the beach. The waste involved in these operations is difficult to gauge, but coal drops into the bays when loaded onto barges, and is also frequently scattered on beaches.

8.7 Oil and Gas Exploration

Oil and gas exploration in Chukotka have been concentrated in Beringovskii and Anadyrskii *raiony* and offshore deposits show great promise in spite of the difficulties which production would entail in such a severe environment . Exploratory work in the Anadyr Depression has yielded positive results and at least three fields are now identified: Vierkhnye-Yechensloye, Izmennaya, and Verkhnye-Teletay. The Anadyr Depression has also proved to be a good source of natural gas and exploratory wells drilled near Anadyr have had good flows of gas (Tichotsky 1991; Wilson 1989).[39] The *Morneftegaz* (Offshore Oil and Gas) Research Institute estimates hydrocarbon reserves in the Sea of Okhotsk, the Bering, and the Chukchi Seas to be equivalent to 116.8-131.4 bbl (billion barrels of oil) (Oil and Gas Journal 91[31], 1993).

In 1991 the Northeast Petroleum Operating Agency (NEPO) was formed by the administrations of Magadan *Oblast* and the Chukchi Autonomous *Okrug*, Khabarovsk *krai*, Koryak Autonomous *Okrug*, and *Rosgeolkom*. NEPO is based in Magadan and has invited all

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39 see also RA Report 1993 (14):104.

interested oil companies to get involved in offshore development in the Bering, East Siberian, and Chukchi Seas. Eight large parcels were expected to be tendered between 1992 and 1995. According to one proposal the funds received from the license auction would go into the budgets of the Far Eastern regions and future income from oil production would be split, with 60% remaining in local budgets and 40% going to Moscow (RA Report 1993 [14]; RA Report 1993 [15]).

The Alaska-Russian Company was also formed in 1991 to assist foreign investors interested in Russia's oil, gas and gold resources. The company is based in Anchorage and has been engaged in preparing oil development projects for the Chukotka Shelf. The geological similarities between the Chukotka Basin and Alaska are seen as good indicators that oil will also be abundant in Chukotka (RA Report 1993 [14]:103).

At least one on-shore oil field (named Uglevoy) has been discovered and tested in the Khatyrka Lowlands, near the settlement of Meynypol'gino on the Bering Sea coast (Wilson 1989). Inuvialuit Petroleum Corporation (IPC) Calgary and *Chukotneftegazgeologia* have established a joint study agreement. They will assess the feasibility of bringing small onshore oil fields into production in the Anadyr and Khatyrka basins. The oil produced would be for export to foreign markets. Crude oil from these basins has a high wax content, but is low in sulphur. Both fields are close to the Chukotka coast (Oil and Gas Journal 91[2]:20, 1993).

8.8 Consumer Goods

Supply and distribution of consumer goods to government stores in settlements and villages in Chukotka is generally carried out by *Chukotsmeshtorg* (today an *optovo-roznichnogo predpriyatiya*; formerly a government organ). Few consumer goods are produced in Magadan *Oblast* and even fewer are produced in Chukotka, thus most are imported from other regions of the country or from abroad. While traditional foods are an important part of the Native diet, non-Natives overwhelmingly prefer European Russian products and have not made Native foods a significant part of their diet. The majority of the population therefore is supported by foodstuffs which are imported into the *Okrug*. Until recently most of this food came from other regions of

Russia and the former Soviet Union, but the past few years have seen a veritable flood of imported foodstuffs and consumer goods coming into Chukotka from other countries. Many items come from the south, from Korea and China, but many others come from the east, including Alaska. Business entrepreneurs (the *komersanty*) have found their wealth in the importation of consumer goods and food: where the government has been unable to supply stores, the *komersanty* are able to do so at tremendous profit. Numerous resolutions have been passed in Chukotka in an attempt to control the importation of goods and the exportation of valuable raw materials (fur, antler, *panty*, ivory, etc.). Import regulations are aimed at ensuring that goods are safe for consumers and are of the "highest quality." The importation of alcohol, although supposedly even more strictly regulated, is an essential part of this area of business. Close relationships between *komersanty*, local administrators, and border guards are necessary for both compliance and circumvention of regulations.

9. Infrastructure

As already noted, the state's investment in infrastructure has been concentrated in the administrative centers and industrial settlements near mines. Even in these areas, however, the reliability of that infrastructure is poor and has deteriorated further with the disintegration of the centralized Soviet state.

9.1 Energy

By the 1960s all villages in Chukotka were said to have been electrified. In many villages today steam-turbines and diesel turbines generate electricity using coal and diesel fuel which is shipped to Chukotka during the summer months.[40] Small coal stoves which used to be the primary source of heat and also served in food preparation in homes have generally been replaced over the years by more "modern" electrical appliances and central heating. Power outages in the Native villages have become more frequent in recent years, as equipment ages and financing for repairs is

40 As noted above, some coal is mined in Chukotka and is thus available locally, but quantities sufficient for the entire *Okrug* are not locally available.

scarce. In the winter months when temperatures are well below zero such outages result in states of emergency because there is generally no other way to heat buildings. In some of the oldest homes the coal stoves have been retained and can provide heat during emergencies when electric generating plants are not functioning, but most homes and other buildings such as schools are left in the cold.

Chukotka has one atomic energy station, located in Bilibino, Bilibinskii *raion*. The station was brought on line by phases, from 1974 to 1977. Its RBMK reactor produces 48,000 kW of power and there were plans (in 1993) to install three new reactors which would increase production to 120,000 kW. These new blocks would be brought on line between 2001 and 2010. Problems with the energy station have focused on the melting of permafrost, not only under the plant itself, but at the Ponerugen River reservoir, which receives warm water from the reactor. The reservoir is 2.5 km away from the station and covers 90 hectares at a depth of 15 meters. The warm water of the reservoir is melting the underlying permafrost, and flows through cracks underground. The depth of the melting has reached 80 meters and while underground pumps help stop water from entering cracks and increasing the melt, nothing has been done to permanently correct the problem or reverse the damage already done. The power station itself is reported to be sinking at a rate of 3 to 5 millimeters per year (RA Report 1993 [14]:107; RA Report 1993 [15]:104). As part of a large-scale program by the Russian government to bury radioactive waste and spent reactor fuel rods, construction of an underground storage facility is planned for the Bilibino station by 1998 (RA Report 1993 [15]:149).

In 1994 the Russian news agency ITAR-TASS[41] reported plans by the Russian firm *Rosenergoatom* to build three "floating" nuclear power plants in Chukotka: one near Pevek, one at the village of Egvekinot, and a third at Mys Schmidta. The plants, which would provide heat and electricity, are expected to cost several billion rubles each and would take between four and five years to construct. Two of these sites, Egvekinot (Iul'tinskii *raion*) and Pevek (Chaunskii *raion*),

41 This ITAR-TASS report was documented in the British Broadcasting Corporation's Summary of World Broadcasts, Sept. 23, 1994.

already have major electrical generating facilities: the Egvekinot Regional Power Plant and the Chaunskii Heat and Electric Power Station.

9.2 Transportation

The Northern Sea Route is the primary means of supplying the eastern Arctic with fuel, food, consumer goods, building materials, etc. The navigational season in the northeast, however, is short and lasts only from June through October. Ice breakers do lead ships through the northern seas from Murmansk in the west around the Chukchi Peninsula, until they are free to travel on to southern Russian ports such as Vladivostok and to international destinations. This traffic is not local, however, and shipments of goods to Chukotkan villages must reach their destinations between June and October or else wait for the next season. (Slavin and Stoianov 1985). Air transportation is possible, weather permitting of course, but is very costly. Primary airports are located in Anadyr, Pevek, and Provideniya; minimal facilities can be found in other locations as well and helicopter transportation is used throughout the *Okrug* (Barr and Wilson 1985; Nekrasov 1974).

Inland roadways are also seasonal. Roughly 5800 km of roads and 5500 km of ice roads connect some towns in the interior of Chukotka with ports along the northern and eastern coasts. Winter ice roads, however, do not become established until November or December, at which time truck transportation along such routes then becomes possible. Most roadways are located in heavily industrialized areas where mining towns must be connected to sea ports, and in the area around the *Okrug* center of Anadyr (Tichotsky 1991).

The basic logistics of transportation have always been complicated by numerous other factors such as cost, the great distances involved, the long time during which goods are en-route, the number of transshipments en-route, lack of docking and unloading facilities for cargo ships, the severity of climatic conditions, etc. Perishable goods are generally delivered to Chukotka by unrefrigerated cargo vessels which results in a significant amount of spoilage. Port facilities are found at Anadyr, Pevek, Provideniya, Egvekinot, Mys Shmidta, and Nagornyi. Small coastal

villages however, generally lack any facilities and under such circumstances goods are off-loaded to small boats or barges -- which deposit their cargo directly on the beach -- or they are carried by helicopter to the beach. It has always been difficult to provision the Far North, but today, when there are no centralized directives forcing the shipment of goods to the North and when there is hard currency to be gained by selling produce to the south, provisioning northern settlements has become even more difficult, resulting in the further decline of living standards.

Shortages of fuel oil and coal are especially serious in the severe Arctic winters, and problems with deliveries and payments have become more acute in recent years. For example, in July, 1992 *Magadannefteprodukt* diverted a tanker carrying diesel fuel and headed for Mys Shmidta in Chukotka, to Magadan ostensibly due to lack of payment but also in part as a political demonstration of Magadan's power in the face of Chukotka's independence from the *Oblast.* Alexandr Nazarov, head of Chukotka's administration protested this action, and the Chairman of *Magadannefteprodukt* in Moscow ordered shippers in Nakhodka, Magadan, and Anadyr to make certain that oil destined for Chukotka reached Chukotka (RA Report 1993 [14]:74). A temporary government group at the deputy minister level was created in Nakhodka at the request of President Yeltsin to handle Arctic navigational problems and coordinate freight shipments to the North (RA Report 1993 [15]:126), but these problems continue to plague the region. In 1993 the deputy director of Primorsk Shipping Company announced that no more oil would be shipped to Chukotka because *Chukotkanefteprodukt* owed the company 5 billion rubles; Chukotka's government replied that it had not yet received money from the government with which to pay its fuel bill. The government's move to privatize industry includes shipping, as seen in the reorganization of the Anadyr seaport into a joint stock company (open type) in 1993 (*Sovetskaya Chukotka* 29 May 1993).

The effects of inadequate and inaccessible transportation in Chukotka should not be underestimated. Travel to conduct business deals, to negotiate administrative responsibilities, to contract for labor or shipments of goods, to attend Native rights or government conferences and to meet with government officials in regional and federal administrative centers, etc. is virtually

impossible for most of the people who should be conducting such activities due to the high cost and unreliability of transportation. An obvious solution might be to conduct business by telephone, but telephone service is unreliable and also expensive. In addition, where large sums of money will change hands, face-to-face negotiations are deemed an absolute necessity. The general atmosphere of distrust and corruption, coupled with the fact that such business dealings are a relatively new sphere of activity, reduce the reliability and therefore the use of the telephone as a means of normal commercial activity.

9.3 Health Care

The rapid social and economic changes which have taken place throughout the North have had a devastating effect on the physical and mental health of Russia's indigenous people, as evidenced by patterns of morbidity and mortality, and the increasing incidence of violence (Finkler 1995; Pika and Prokhorov 1988; Sharov 1988). The health-care system in the North is inadequate by all measures. Since the beginning of perestroika, the number of doctors in the *Okrug* has relentlessly fallen. In 1989 there were only 48.4 doctors (all specialties) per 10,000 individuals and 172.5 general medical personnel per 10,000 individuals in Chukotka (*Osnovnie pokazateli...*1990). Equipment, medication, and basic supplies are all in short supply. Attracting and keeping medical personnel is extremely difficult. Most doctors are non-Native and when they leave the *Okrug* their replacement is never certain.

Figures 16 and 17 provide general information on health care facilities and personnel in Chukotka, but are only current as of January 1, 1991. These data clearly do not reflect the shortages of equipment and medicines, nor do they accurately reflect the rapid turnover and permanent departure of non-Native medical personnel from Chukotka. In 1994 the number of medical personnel in the *Okrug* was reported to be at only 49% of what was required for adequate care of the population (*Krainii Sever* , 26 May 1994).

Administrative Unit	Number of Hospitals	Number of Hospital Beds	Dispensaries and Polyclinics	Surgical-Obstetrical Stations (FAP)[42]
Chukchi Autonomous *Okrug*	52	2575	99	78
Providenskii *raion*	5	170	8	3
Chukotskii *raion*	5	200	4	3
Iul'tinskii *raion*	8	290	14	8
Shmidtovskii *raion*	3	190	7	2
Bilibinskii *raion*	8	405	17	17
Chaunskii *raion*	8	415	18	15
Beringovskii *raion*	6	190	8	3
Anadyrskii *raion*	9	715	23	27

Figure 16. Medical Facilities in the Chukchi Autonomous *Okrug*.[43]

Administrative Unit	Number of Doctors	Medium-level Medical Personnel
Chukchi Autonomous *Okrug*	763	2195
Providenskii *raion*	52	135
Chukotskii *raion*	39	124
Iul'tinskii *raion*	79	247
Shmidtovskii *raion*	57	161
Bilibinskii *raion*	131	389
Chaunskii *raion*	114	427
Beringovskii *raion*	53	157
Anadyrskii *raion*	238	555

Figure 17. Medical Personnel in the Chukchi Autonomous *Okrug*.[44]

42 *Feld'shersko-akuskerskii pynkt* (FAP); the *feld'sher* it a health care professional who has somewhat more training than a nurse, but not as much as a physician.
43 Figures are accurate for January 1, 1991 (*Sotsial'no-ekonomicheskoe*...1991.)
44 Figures are accurate only for January 1, 1991 (*Sotsial'no-ekonomicheskoe*...1991.)

9.4 Education

The educational system which was intended to integrate the northern peoples into "Soviet" society has failed. A universal education which devalues Native cultures and the predominance of boarding schools which separate parents from children for long periods of time have resulted in the alienation of children from their parents and grandparents in language, occupation, and world view, as well as from the land on which they live. Ethnic discrimination has further eroded the benefits which education could offer to Native youth (Komarov 1988; Levshin 1988; Nemtushkin 1988; Rytkheu 1988, 1989; Sangi 1988; Sharov 1988; Vakhtin 1993).

Teachers, many of whom are non-Native, have been leaving the *Okrug* in large numbers in recent years and are returning to their homes in the central parts of Russia and the NIS. In Anadyr, arrangements have been made with students at the Pedagogical Institute, whereby in exchange for financial and material support, they would remain in Anadyr and teach school for 5 years upon graduation. Another option being used in 1992 was to pay new teachers from outside the *Okrug* 15,000 rubles to set themselves up in Anadyr (*Sovetskaya Chukotka* 6 February 1992). As the cost of living increases, however, so must the size of such incentives and it is uncertain whether government coffers can keep pace.

Figure 18 provides some general data on general education schools in Chukotka.

Administrative Unit	Number of Schools	Number of Students in Those Schools	Number of Teachers
Chukchi Autonomous *Okrug*	87	8954	610
Provideniskii *raion*	8	1993	199
Chukotskii *raion*	7	1428	150
Iul'tinskii *raion*	10	2948	252
Shmidtovskii *raion*	6	2955	221
Bilibinskii *raion*	15	5040	392
Chaunskii *raion*	18	5742	435
Beringovskii *raion*	6	1755	162
Anadyrskii *raion*	17	6538	497

Figure 18. General Education Day Schools in the Chukchi Autonomous *Okrug*.[45]

9.5 Community and Social Services

Nothing has as yet, fully replaced the Communist Party as the source of funding for various social welfare activities and groups, such as the councils of elders, of women, and of youths. In most cases, employers and management enterprises (such as the agrokombinat "Chukotka") are expected to provide services for their workers. Until recently for example, *sovkhoz* administrations were expected to provide housing, utilities, health services, and other services such as kindergartens and cafeterias to herders, hunters, and other farm employees. Recent government directives for the reorganization of the *sovkhozy* have resulted in the disbursement of those functions to local government (municipal authorities) and other agencies (both private and government) which deal directly with housing construction and repair, energy, food services, education, etc.

Various groups have begun trying to establish the means by which to provide people with support in the face of social and economic chaos. For example, in Bilibinskii *raion* an organization called *"Sodeistvie"* has been created to help people living and working in the tundra, especially

45 Data is accurate only for the beginning of the 1990/91 academic year (*Sotsial'no-ekonomicheskoe*...1991). The number of teachers has declined dramatically in the past five years but accurate figures of the number remaining are unavailable.

those who fall outside the systems of state farm and governmental employment (*Sovetskaya Chukotka*, 11 January 1992). Native organizations, such as the "Society of Eveny" and the "Society of Eskimos" work to provide special types of assistance to their respective ethnic groups, although funds are very limited.

Living conditions in Chukotka have rapidly worsened in the past several years. Vladimir Etylen, Chairman of the Soviet of People's Deputies of Chukotka, addressed the Soviet of Nationalities in Moscow in 1993 in regard to its resolution "On urgent measures for the stabilization of the social and economic conditions in the Chukotka Autonomous *Okrug*" (17 July 1992). Etylen noted that reindeer herds had declined by half, increasing unemployment among Native peoples, public cafeterias had closed in 23 of the 36 national villages, non-Native medical personnel had left the *Okrug* in large numbers, and incidences of crime, alcohol abuse, and suicide had increased (*Sovetskaya Chukotka* 1 July 1993).

9.6 Social Welfare

Social welfare payments are specified for most of the Native population of Chukotka and are frequently amended in attempts to keep pace with rising costs. Most Native families receive some type of aid in the form of transfer payments. Families who are not sufficiently provided for (*maloobespechennye sem'i*) in terms of food, consumer goods, and shelter receive payments for each individual in the family based on the total income of family members. Families with many children (*mnogodetnyi sem'i*), single parents, pensioners, and invalids all receive social assistance. In 1994 there were approximately 12,000 families in Chukotka; 8,315 children attended 85 kindergartens (*detskii sad*) and 19,327 young people studied in 83 schools. There were 1952 *mnogodetnyi* families and just over two-thousand single-parent families in the *Okrug* in 1994 (*Krainii Sever*, 10 March 1994). In 1993 there were approximately 1500 invalids in Chukotka of whom 251 are children (*Krainii Sever*, 2 December 1993). Funds are also provided for the maintenance of *internaty* – boarding schools for the children of reindeer herders and other children whose parents are unable to care for them. Compensation is also supposed to be available to the unemployed who can't find work because there is no work available. Sociological studies

(Donskoi 1990) carried out between 1981-86 found that 16.8% of the able-bodied Native population of Chukotka was unemployed (Pika and Prokhorov 1994:155). On January 1, 1994 there were 986 people (Native and non-Native) registered as unemployed in Chukotka, compared with 845 registered the previous year: 25% of these were Native; 68% were women (*Krainii Sever,* 18 January 1994). Decentralization and privatization have exacerbated this situation today.

Several specific "funds" exist to provide social assistance, but it is difficult to gauge their effectiveness and financial resources: 1) *vnebyudzhetnye fondy* (funds outside the *Okrug* budget); 2) *raion fond sotsial' noi podderzhki naseleniya* (RFSPN - "*raion* fund for the social support of the population" – each *raion* has one of these funds; 3) *Chukotskii territorial' nyi fond sotsial' noi podderzhki naseleniya* (ChTFSPN – "Chukotka territorial fund for the social support of the population); 4) *Anadyrskii gorodskii FSPN* ("Anadyr City fund for the social support of the population."

There are also some forms of social service unique to the Russian North. The *agitkul' tbrigady* (AKB) are groups of workers who go into the tundra to organize transport, relay news, and bring supplies to miners, weather station personnel, and even reindeer herders, although the later report very few visits from the AKB. Funding for this work is scarce too and the AKB have been forced to limit their activities.

10. Privatization

The basic rules regarding the privatization of government property in Chukotka[46] were set out in 1994 (published in *Krainii Sever,* 26 May 1994, p.2). The decentralization of economic and governmental functions from federal authorities to the *okrug* and *raion* levels has provided some individuals with opportunities to acquire state property at very low prices. The Soviet bureaucrats of yesterday are quite often the Russian entrepreneurs of today.

In Chukotka, where the population has been concentrated into small settlements, there has historically been very little duplication of services at the local level. This means that when an

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46*Postanovlenie o delegirovanii polnomochii administratsii okruga po upravleniyu i rasporyazheniyu ob' ektami gosudarstvennoi sobstvennosti Chukotskogo avtonomnogo okruga.* Administration of the Chukchi Autonomous *Okrug* 17.05.1994, No.215

individual purchases, for example a cafeteria, it is most likely the only cafeteria in the settlement and thus as a monopoly enterprise has the potential for significant profit. The same is true of village bakeries, sewing shops, stores, and other small enterprises which have been privatized. Although much state property has been privatized, the decentralization of power does not necessarily follow if the administrators of that property remain the same.

The privatization of housing has been exceptionally difficult. Non-Natives have been given the opportunity to purchase or build houses/apartments in the central regions of the country with financial support from the *Okrug* and many have taken this route out of Chukotka. Other non-Natives already had apartments in other parts of Russia or in the former Republics and they returned to these homes, often after the purchase and resale (at substantial profit) of their village apartments in Chukotka. The cost of purchasing one's apartment is beyond the means of most Native people; housing then tends to be purchased by Russian *komersanty* and by other non-Natives. One provision[47] of numerous official decisions was that vacated apartments acquired by local organs of executive power were to be distributed to individuals belonging to the Numerically-Small Peoples of the North and to the unemployed (*Krainii Sever,* 14 May 1994). The success of this decision is uncertain.

The reorganization of *sovkhozy* can also be viewed within the context of privatization and economic reform in general but is perhaps even more complicated than the privatization of other forms of government property. Although the *sovkhozy* were ordered to reorganize and create new forms of agricultural enterprises, not all have done this and it is still possible to speak of *sovkhozy* in Chukotka. Most *sovkhozy* have already divested themselves of jobs and facilities (construction, electrical generating plants, schools, etc.) not directly related to agriculture. All *sovkhozy* in Chukotka were (under the Soviets) and are still integrated within one organization, the agro-industrial kombinat "Chukotka." "Chukotka" was a government organ under the Soviets; today it is supposed to be an independent organization, although it has significant government contacts. Until recently, only *sovkhozy* were included in "Chukotka," but today this organization includes

47*Reshenie okruzhnoi komissii po raspredeleniyu kvartir, bykupaemykh i stroyashchikhsya v tsentral'nykh raionakh Rossii*, Chairman of the Commission, M.I.Voronov, 13.04.1994.

trade, manufacturing and raw material processing enterprises as well. The past several years have seen significant controversy and mismanagement in the work of the kombinat and accusations of corruption and incompetence abound. This has resulted in more independent actions being taken by the state farms and other enterprises within "Chukotka" (*Postanovlenie*...1993).

A number of alternatives were viewed as possible for reorganization of the *sovkhozy*: family-clan communes (*semeino-rodovoi obshchiny*), associations (*tovarishchestva*), and farms (*fermerskye khozyaistva* – a mid-way point between the *sovkhozy* and *obshchiny*). Other options are also being explored in reindeer herding, such as the creation of joint stock companies (*aktsionernye obshchestva*) and leasing enterprises (*arendnye predpriyatiya*) (*Sovetskaya Chukotka*, 18 January 1992). All new forms require substantial changes in the way operations are carried out and how decisions are made. For example, how will membership in a family-clan commune be determined, and on what terms can other people work for the commune? How can pasture be divided and allotted for use by different organizations? How can herds be acquired? In contrast to the Yamal region, where in 1992 48% of the reindeer were in private hands, in Chukotka in that same year only 12% of the herds were privately owned, making the acquisition of reindeer a difficult problem (*Sovetskaya Chukotka*, 19 January 1993). *Sovkhoz* directors have been extremely reluctant to sell either animals or equipment to herders trying to establish private enterprises.

Numerous cooperatives and associations related to traditional Native economic activities have already sprung up throughout Chukotka, but their activities and viability can not be evaluated without direct, on-site contact. In some parts of Chukotka there has been little or no economic reform, and local people have received very little information about the possibilities of reform. Quite often the opinion is expressed that the Native peoples are no longer capable of managing their own economies, which should be maintained in some structure similar to the *sovkhoz* or state-owned farm. Throughout Magadan *Oblast* as a whole, agricultural reform has been slow and the financial situation of the agricultural sectors, particularly the *sovkhozy*, has continued to worsen. In 1992 in the *Oblast*, 22 out of 63 *sovkhozy* ended the year with profits of 548 million rubles,

while 41 farms ended the year with losses of 554 million rubles (RA Report 1995 [15]). While these data are not specific to Chukotka's *sovkhozy*, it can be assumed that they are in the same difficult position.

Joint venture projects are also seen as having the potential to help struggling local economic enterprises, both industrial and traditional. Unfortunately, while many foreign visitors to Chukotka present their ideas to the local people and generate considerable excitement, few projects are ever actually initiated and the success rate of those which are begun is low. Chukotkan visitors to Alaska also frequently return encouraged by the contacts that were made, but maintaining lines of communication is difficult and the political and economic instability of Russia as a whole makes foreign investment difficult for Chukotka to secure.

11. Military and Security Significance

The close proximity of the Chukchi Autonomous *Okrug* to North America has made it a significant factor in Soviet defense plans. In World War II Chukotka played an important part as a link in the Alaska-Siberian Ferry Route, along which combat and transport aircraft were sent to the Soviet Western Front (Shimkin and Shimkin 1975). Today Chukotka is part of the Far Eastern Military District whose headquarters are in Khabarovsk, more than 1000 miles from Anadyr. By 1995 the headquarters for the Joint Command of Far Eastern Troops, which coordinates the Far Eastern Military District and the Pacific Fleet, were established at Komsomolsk-na-Amure. Operations are to be carried out from this post, but staff organizations remain in Khabarovsk and Vladivostok (RA Report 1993 [15]:136). While Chukotka itself does not seem to have functioned as a strategic command center in Soviet military operations, its ports are important in linking the Northern and Pacific fleets. The port of Anadyr serves as a base for light naval craft and has, over the past several years, been improved to allow deep-water moorings (Swearingen 1987). The Far Eastern Military District (MD) was a key Soviet defense area, with fully-staffed Soviet divisions. The attention of the Far Eastern MD was directed, however, not toward North America but primarily toward China and the defense of Soviet Central Asia, as well as toward protecting Soviet

interests in the Middle East (Erickson et al. 1983; Scott and Scott 1979). The past several years have seen drastic cuts in the military budget, and in conjunction with new disarmament policies, the Pacific Fleet has been forced to decommission many of its submarines and surface warships. The number of military personnel is now said to be half the necessary number to maintain combat readiness (RA Report 1993 [14]). Again, because Chukotka does not seem to be a vital link in this system, it can be expected that whatever amount of support was received from the military for maintaining port facilities in Chukotka will disappear.

In 1993 the Administration of Internal Troops for the Far East and Siberia (which includes Chukotka) was reorganized into the Eastern District of the Internal Troops of the MVD (Ministry of Internal Affairs) of Russia. Major General Aleksandr Muratov was the commander at that time. The unit is reportedly staffed at only 60-65%. The function of the MVD today is to protect not only state property, but also private property and the rights of individuals (RA Report 1993 [15]:132; *Tikhookeanskaya zvezda*, 21 May 1993, p.1).

Chukotka is part of part of the Northeastern Border Guard District.[48] The District also encompasses Kamchatka, Magadan *Oblast*, part of the Kuril Islands, and the northern part of Khabarovsk *krai*. The primary function of the District is to protect the 200 mile economic zone, which encompasses over 2.5 million square km. This task has been made exceptionally difficult due to the high cost of fuel for patrol boats, and the lack of money to purchase fuel (RA Report 1993 [15]:132; *Kamchatskaya pravda*, 29 May 1993, p.1).

Although Chukotka may not have critical military significance, its location and extensive coastline place much of its land and all of its territorial waters within the jurisdiction of the border guards whose function it is to ensure the integrity of Russia's borders. As such there is a strict code of regulations for transportation by air, road, on inland waterways and in coastal waters (and by any other means) that everyone – tourists, hunters, fishermen, and travelers of any kind – must adhere to. Proper identification and registration with the border guards is required of every foreigner; hunters who navigate the coastal waters in search of whales, walrus, and seals must

48 In 1993 Lt. general Viktor L. Beketov was commander of the District.

register their crews on each trip out of the village. Russian citizens (Native and non-Native) traveling to a location more than 50 km away from settlements are also expected to notify the border guards of such trips (*Pravila...*1994). Many coastal villages have border guard outposts, but where there are none local administrations are expected to oversee the borderland rules.

12. Archaeological and Cultural Resources

The published work of Soviet archaeologists on Chukotka's prehistory is extensive and the works cited below provide further references to archaeological research. Systematic archaeological research in Chukotka began in 1945 with the excavation of prehistoric Eskimo sites by Rudenko (1947) and has continued to concentrate on coastal sites associated with the prehistoric Eskimo/contemporary Yupik population (e.g. Arutiunov and Sergeev 1968; Bronstein 1991; etc.). To date the most significant archaeological sites have been found primarily along the coast, with others located along inland waterways (Ackerman 1984). Archaeological sites on the interior of the Peninsula and further south in Chukotka indicate relationships with European and Asian cultural complexes (Dikov 1977; Okladnikov 1953). The paucity of inland Chukchi sites is due to the lack of research in this area and not to the absence of such sites. Chukchi herders recognize many sites of cultural significance within the interior of Chukotka.

Nikolai Nikolaevich Dikov is one of the most well-known archaeologists to have studied the prehistory of Chukotka (Dikov 1974;1989; and many other publications). Academician Dikov lives in Magadan and is affiliated with the North-Eastern Interdisciplinary Research Institute (Far Eastern Branch of the Russian Academy of Sciences) in that city. Prior to 1992 most archaeological research in Chukotka was overseen by Dikov. When Chukotka severed relations with Magadan, scientific "sovereignty" (archaeological, ethnographic, botanical, biological, etc.) was seen as an important aspect of Chukotka's independence. Research is now coordinated by the Scientific Research Center "Chukotka" (*Nauchno-Issledovatel'skii Tsentr "Chukotka"*) in

Anadyr.[49] The center is an affiliate of the Russian Academy of Science and its director is Alexandr Galanin.

A full discussion of Chukotka's prehistory and archaeological record is beyond the scope of this report. It is important to remember, however, that archaeological research in this area is a relatively young field and the international academic community sees extraordinary potential here for understanding such complex processes as the peopling of the New World and human adaptation to harsh arctic environments. In regard to just such issues, Chukotka's archaeological resources have recently been made quite famous through the Smithsonian Institution's "Crossroads of Continents" exhibit (see Fitzhugh and Crowell 1988).

It is also important to understand the desire and the right of Native peoples to control not only their future, but their past as it exists both spiritually and physically, i.e. within the context of archaeological sites. North American archaeological and ethnographic research has undergone profound changes in response to the demands of its First Nation peoples for control of their heritage – be it in the ground, in a museum, or in their own communities. These rights belong to the First Nation peoples of Russia as well and must be taken into consideration not only by scholars but by those individuals and organizations with plans for economic development on lands occupied historically and prehistorically by Native peoples.

13. Environmental Protection

Environmental protection, Native rights, and economic development are all closely bound together in Russia and have been the subject of a growing body of literature (Anderson 1992; Andreeva 1991; Chance and Andreeva 1995; Fondahl n.d.; Osherenko 1995; Pika and Prokhorov 1994; Schindler 1994; etc.). The lands used for hunting, reindeer herding, and fishing are the same lands which have been degraded by industrial development and which most need environmental protection. Mining activities have employed inefficient and ecologically damaging technologies; all-

49Although the Center attempts to coordinate research in Chukotka and may have considerable pursuasive powers, it does not appear to have final authority over who may and may not conduct research within the Chukchi Autonomous *Okrug*.

terrain vehicles employed by both industry and reindeer herders do irreparable damage to the tundra vegetation; ships using the Northern Sea Route frequently dump refuse into the sea which eventually finds its way to the shoreline. Fires on the tundra, often attributed to tracked vehicles and arson destroy thousands of hectares of reindeer pasture every year. Who has the right of priority in land use and resource exploitation? What kinds of activities should be allowed on protected lands? Who should make the decisions and who should enforce compliance? These are just a few of the questions being debated throughout Russia today. The material presented below outlines some of these concerns within the context of the Chukchi Autonomous *Okrug*.

13.1 Protected Areas

Goskompriroda (State Committee for Environmental Protection) is responsible for the implementation and enforcement of government environmental regulations. *Goskompriroda*'s presence in the Chukchi Autonomous *Okrug* consists of eight administrative staff personnel in Anadyr and 33 field staff located throughout the *Okrug*. In Chukotka the Committee on Ecology and Natural Resources of the Chukchi Autonomous *Okrug* (as part of the Ministry of Ecology of the Russian Federation) administers policies, oversees the implementation of regulations, issues fines, etc. to organizations such as the *sovkhozy* when they are in violation of policy or have failed to achieve certain norms.

Chukotka has eight protected areas: one nature reserve (*zapovednik*), one Union refuge (*Respublikanskii zakaznik*), five provincial refuges (*oblastnoi zakazniki*), and one provincial moose reserve. Figure 19 is adapted from Tichotsky (1991) and lists these reserves. *Zakazniki* have been established to protect migratory waterfowl. Hunting and trapping furbearers is permitted in the Tundrovii, Avtotkuul', and Tumanskii refuges. The Vrangel Island Reserve includes Herald Island and its status as a *zapovednik* provides it with the strictest level of protection. Arakamchechen Island is an important bird nesting and walrus breeding ground (Tichotsky 1991). Kolyuchin Island used to be an important walrus nursery, but helicopters and other traffic

surrounding the polar station near the island have disrupted the walrus, and hunting there is no longer possible (*Sovetskaya Chukotka,* 6 February 1992).

Name of Area	Status	Area (hectares)	Location (*Raion*)
Lebedinyi	*zakaznik*	unknown	
Tundrovyi	*zakaznik*	45,000	Anadyrskii-Beringovskii
Avtotkuul'	*zakaznik*	250,000	Anadyrskii-Beringovskii
Tumanskii	*zakaznik*	398,000	Beringovskii
Ust-Taniyrerskii	*zakaznik*	450,000	Anadyrskii
Teiukuul'	*zakaznik*	20,000	Chaunskii
Omolon	*zakaznik*	57,000	Bilibinskii-Srednekanskii[50]
Vrangel, Herald Islands	*zapovednik*	795,000	
Arakamchechen Island	walrus breeding		Providenskii
	pamiatnik prirodi		throughout Chukotka

Figure 19. Protected Areas in the Chukchi Autonomous*Okrug*.

Decisions regarding the control of resources and their exploitation and/or preservation are often contested. Under the Soviets such decisions were all made by government administrators; today "private" enterprises and Native groups are also requesting a voice in the use of resources. Without legal precedent in these areas and without the power to enforce regulations, the granting of access to resources is an area of potentially intense corruption. For example, in Chukotka, the cooperative "Ekos," which was formed by the Chaunskii and Anadyrskii *raion* executive committees and the fishing inspection and preservation department (*inspektsiei pybookhrany*), was given permission to exploit fish resources in Lake El'gygytgyn, located on land controlled by the Ust'-Belaya *sel'sovet* without asking the Ust'-Belaya *sel'sovet* (*Sovetskaya Chukotka* 25 January 1992, p.1).

A number of projected joint ventures between American (primarily Alaskan) and Chukotkan partners interested in environmental preservation and associated tourism have been reported in the news, but there are few concrete results available for discussion. One of the few

50 Srednekanskii *raion* is located in Magadan *Oblast*, and is not part of the Chukchi Autonomous *Okrug*.

projects to receive international attention is the Beringian Heritage International Park, discussed below. Visible effects of this Park in Chukotka, however, are also difficult to find.

13.2 Beringian Heritage International Park

In 1990 federal park authorities of the United States and the Soviet Union announced plans for an international park between Alaska and Chukotka. The Beringian Heritage International Park would join the Bering Land Bridge National Preserve in Alaska with a park encompassing the Providenskii and Chukotskii *raiony* of Chukotka for a total area of 3,053,300 hectares. The primary goal of the park would be to preserve the rich and unique natural community there. Mention has also been made of the cultural community in Chukotka and the need for its "preservation," but details regarding this process are lacking (Graham 1991; Rosen 1991).

There has been opposition to the Park from both the Alaskan and Chukotkan sides of the Bering Strait. The Sitnasuak Native Corporation in Alaska and mining interests have expressed numerous concerns, which focus on the intent of Park organizers (i.e. exactly what kind of park would it be?) and Congressional legislation for the lands involved, which may include restrictive land-use measures as advocated by environmental groups such as the Audubon Society (RA Report 1993 [14]:67). Intense discussions about the Park have taken place in villages throughout the affected areas of Chukotka and in the *Okrug* center of Anadyr. Most information on the Park has come from the local press, but occasionally representatives from *raion* land reform offices provide information in village meetings. In 1993 *Sovetskaya Chukotka* published the borders of the Park on the Russian side. Actions regarding the Park were scheduled to begin in 1993-1994 with the determination of how various issues would be handled: how will nature be protected, how will Native interests be protected, etc. The heads of Chukotskii and Providenskii *raiony* also had to define the areas of compact Native settlement, clan and commune land-use territories, and if possible natural areas to be set aside for preserved status.[51]

One of the most controversial aspects of the Park in Chukotka has been its organization and administration. Protests against "outsiders" from Moscow making plans and agreements without

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51*Sovetskaya Chukotka* 9 February 1993, page 1.

consulting Chukotka's residents have been heated and the question of who will administer the Park, Moscow or Chukotka, has drawn special attention. In particular Park organizers have been criticized for bringing in "specialists" from Moscow to study Chukotka and determine the feasibility of the Park when the Far East has its own specialists who have actually lived and worked in Chukotka for many years. In April of 1994 eligible voters in Iul'tinskii, Providenskii, and Chukotskii *raiony* were asked to decide whether the Park be administered by the Moscow government or by the government of the Chukchi Autonomous *Okrug*. Over seventy-nine percent of the voters said they wanted control to be in Chukotka, not Moscow.[52]

Many questions remain regarding the mission of the Park and the rights of Native peoples in Chukotka. In fact it is unclear exactly to what extent the Park actually exists today (Schweitzer, personal communication 1996). Communications between Alaska and Chukotka do not seem to include Russia's Native peoples living in villages within the Park boundaries and thus their voices are not being heard.

14. First Nation Rights

In March 1990, the first "Congress of the Numerically-Small Peoples of the North" was held in Moscow to discuss the political and economic situation of Russia's First Nations and to consider what direction further development should take. At this Congress the "Association of Numerically-Small Peoples of the North" was created and Vladimir Sangi was named as its President (*Materialy*...1990). Since this time other branches of the Association (now called the "All-Russian Association of the Peoples of the North") have been formed throughout Russia. The Second Congress of Peoples of the North, held in Moscow in 1993, elected Eremei Aipin (a Khant) as president, replacing Sangi. Legislation exists which provides access to lands and resources for Native peoples, but the implementation of such laws remains difficult and political

52*Postanovlenii Rezul'tatov golosovaniya po voprosu podchineniya parka "Beringiya."* (Resolution on the results of the vote on the question of the subordination of the park "Beringiya.") Election Committee of the Chukchi Autonomous *Okrug*, 1994. This is the only reference to Iul'tinskii *raion* that the author (Schindler) has seen in reference to the Park.

status for First Nation peoples in Russia has yet to be enacted (Fondahl 1993, 1995; Grant 1993; Schindler 1992; Vakhtin 1993, etc.).

In January 1990, the first meeting of the "Association of Numerically-Small Peoples of Chukotka and Kolyma"[53] was held in Anadyr. The goals of the Association are to foster the rebirth and strengthening of the indigenous peoples of the region. Membership is not restricted to representatives of the indigenous groups but is open to anyone living in the region and supporting the goals of the Association. Four major areas of activity are defined by the Association: 1) political rights, 2) economy, 3) spiritual development and rebirth of Native cultures, and 4) health.

Politically, the Association is working to ensure indigenous representation at all levels of government. There are many plans for the economy, including the cessation of industrial development until more rational, environmentally-sound development can be undertaken and priority of indigenous land-use for hunting and herding over industrial activities. The Association assists indigenous people in the self-determination of forms of property: collective, family, personal, etc. The rebirth of ethnic-awareness and the unique cultures of the indigenous peoples must be based on political and economic transformation. The strengthening of national languages, culturally-appropriate education and employment afterwards, the revival of ancient rituals and ceremonies, review of pension support for herders and other people occupied in "traditional" spheres and the lowering of retirement age are just a few of the goals of the Association in this area. Finally, the health care system (as briefly described earlier) is in serious need of restructuring and support in terms of physical plant, personnel, and equipment if the indigenous population is to be adequately served (*Ustav i programma*...1990). It is clear, however, to all of the Native peoples in Chukotka (and elsewhere) that they must achieve political power in order to carry through with their economic and social agendas. At various levels political activism has been taking place with greater frequency and stridency.

The Yupik population of Chukotka has its own organization, *Yupik*. The problems facing this group are even more critical than among the Chukchi, because of the small size of the Yupik

53Since Chukotka's separation from Magadan *Oblast* the phrase "and Kolyma" has been dropped from the Association title.

population. They have on their agenda the preservation of their unique regional cultures, language, traditions, and health. They have also taken on several political and economic issues: Native rights to fishing and hunting grounds and lands of traditional use by Yupik peoples; the development of mineral resources in Chukotka; the International Park "Beringia"; and the participation of their organization *Yupik* in elections to the *Okrug* Duma (*Krainii Sever* 16 February 1994, p.3).

Within the ethnically-based organizations discussed above there are also occupation-specific organizations for hunters, school teachers, and medical personnel. The reindeer herders have organized the *Soyuz Olenevodov,* (Council of Reindeer Herders). These organizations are trying to focus on the problems specific to their occupations within the larger context of economic reform and social upheaval.

15. Analysis and Conclusions

The Northern Sea Route is a vital transportation and supply route for all residents in the Chukchi Autonomous *Okrug*. It is especially critical for Native peoples, who have few opportunities and little means for travel outside the *Okrug*. At the same time, the Sea Route and its industrial customers are primarily non-Natives, with little interest or financial ability to provide the services and goods required in the Native villages without direct government subsidies. Native environmental concerns revolve around the degradation of natural resources through further expansion of the mining industry and possible oil production in the *Okrug*. Healthy and accessible reindeer pastures, inland fishing and hunting grounds, and coastal marine resources are vital to the indigenous economy and to the physical and spiritual survival of the Chukchi and Yupik peoples of Chukotka. Despite official Soviet proclamations regarding the "modernity" of Native life in the Far North and the assimilation of Native peoples into the "Soviet people," the dependence of indigenous peoples on traditional sources of food such as sea mammals, reindeer, and fish and traditional means of exchange and procurement has been made most evident in the wake of the Soviet Union's disintegration.

Expansion of the extractive industries necessitates expansion of shipping traffic, port facilities and infrastructure if skilled workers are going to be kept in the industry. Native concerns also focus on apparent increases in government and private investment in industrial development (a non-Native sphere) while Native villages and their residents continue to experience the most severe shortages of basic goods and services. Attempts are being made to keep some of the profit from mineral extraction in local coffers, but the success of these arrangements is unknown at present. The establishment of reliable and affordable shipping is of paramount importance to any further development in Chukotka -- Native and non-Native. It is not, however, a matter that can be decided only between the Chukotka government and the shipping industry. Chukotka relies on Moscow for its budget, and if payments are not timely, or worse yet, nonexistent, the newly privatized industries such as shipping will not be able to do business in Chukotka.

Several specific areas of research are necessary to advance planning for expansion of the Northern Sea Route. A first priority must be the consultation of Native peoples in Chukotka. The flow of information to the Native villages is almost non-existent and therefore Native peoples (and resident non-Natives) remain uninformed about their government's plans for economic development, environmental protection, social welfare, etc. On-site contact must be made with residents along the shipping route who would be directly or indirectly affected by increased traffic. Part of such on-site contact must include the dissemination of written documents to residents which explain in clear language the proposed changes in the Northern Sea Route. Residents should be given the opportunity to comment and ask questions. Quite typically, official policy announcements arrive in the offices of the *sel'sovet* or *sovkhoz* administrator and are seen by no one other than administrative personnel. Sometimes a copy of a document might be briefly displayed in a public area for anyone to read. Most of these documents, however, are written by bureaucrats for bureaucrats: they are not written for the layman to understand. Information should be disseminated in a readable, understandable form, not over simplified, but simply intelligible by the average person.

A second area of research is needed to understand local political hierarchies and the relationships between government agencies and privatized industry. Without such knowledge it is impossible to carry out negotiations or planning. Secondary sources of information, such as statistical materials compiled by various administrative agencies provide basic types of data on for example, privatization. Discussions with *kommersanty* in Chukotka, however, are much more revealing about the nature of private enterprise in Chukotka and provide a more accurate picture of the day to day functioning of private businesses than do government documents.

A third area of research is needed to better understand the rapidly changing system of social welfare, upon which the majority of Native people in Chukotka rely (at least in some part) for their basic needs. Within the context of social welfare must come an investigation of privatization in industry and the establishment of relationships between industry, local government, and the creation and maintenance of infrastructure for both non-Native and Native populations.

The position of Native peoples and the work of Native associations must also be examined first-hand. INSROP researchers should make every attempt to work in partnership with Native peoples on assessing the impact of further development of the Northern Sea Route. Dialogues should be established between industry, environmental agencies, Native organizations, INSROP researchers and planners, and government agencies; opportunities to meet and discuss issues of concern should be provided to all parties.

The methodology of further INSROP research is very important. Political and economic change is rapid in Chukotka; therefore, the research recommended above must be carried out in Chukotka making extensive use of anthropological interview and survey techniques. The collection of statistical materials is also important, but should be seen as supplemental; such materials could be collected by local representatives of Native associations and through the various administrative offices involved. Survey and interview research should be carried out by trained anthropologists working with Native representatives. Those seeking to enhance future prospects for international use of the NSR will benefit by deeper knowledge of the human as well the natural and physical dimension of the Arctic region. They may thereby reduce political and administrative problems that

could arise in expanding trade and commerce in the region. Additionally, by making full and accurate information and future plans accessible and understandable to the local communities, those who seek to use the NSR may increase local receptivity to their plans.

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APPENDIX

REVIEW BY DR. JOËLLE ROBERT-LAMBLIN

INSROP Working paper

Review of the report :

« Indigenous peoples and development in the Chukchi autonomous okrug »

by Debra L. Schindler

Generally speaking, this report is well constructed. The author gives us a clear and well documented view of the Chukotka (geography, climate, resources), as well as of the past and present conditions of the populations of the area, whether native (ethnic minorities) or non native (Russians, Ukrainians and others).

Russian data has been well reviewed and extensively used in the analysis. The lengthy bibliography contributes to the value of this work. We can however, regret the absence of some references such as the publications of B. Chichlo for the socio-political aspects, of M. Krauss and N. Vakhtin for problems of education and survival of native languages, or of T. Mala for medical and public health questions.

The great interest of this work is to show clearly the extreme rapidity of economic and political changes in Chukotka today, after the collapse of the soviet system and the chaotic passage from « collectivization » to « privatization ». This difficult economic transition is well recalled, as are ecological aspects, administrative and legal problems, tensions between natives and non natives, as well as the rise of a political conscience linked to the increasing importance of Native Associations.

These various analysis represent a good background for a better understanding of the impact on native populations of the Northern Sea Route development project. In the perspective of an opening of the NSR for international shipping, D. Schindler's report brings clearly forth, in its conclusion, the great necessity of establishing a real dialogue between the various protagonists of the project and the native populations concerned (and not only representatives of the administration). This could be achieved through information campaigns, consultations and anthropological interviews. Rightly so, the author insists on the importance of the human factor to be taken into account so as to lighten the political and administrative problems which can arise with the extension of world trade to this area.

In a more particular area, that of demography, the information should have been presented more critically, since the data presented is often contradictory. For example, the paragraph at the top of p. 23 contradicts the paragraph 2 of page 24. And the second paragraph of p. 25 contradicts the data given in fig. 4 p. 24. The fall of birth rate of p. 23 has still to be explained. Likewise, for recent years, the « low birth » rate associated to a « high mortality » does not permit the explanation of the population increase of 35% in ten years, as it is presented here (p. 31), for the Yupiks (risen from 1278 individuals in 1979 to 1719 in 1989).

Finally, for minor details :

p. 13 - are there really two species of white bears : sea bears (Ursus maritimus) and polar bear (Thalarctos maritimus) ?

p. 17 - the text at the end of the first paragraph does not appear to correspond to fig. 4

p. 21 - the first paragraph must mention fig. 3 and not 2.

p. 22 - as far as the emigration of non natives is concerned, it would have been interesting to know the importance (the number) of departures of inhabitants of towns like Pevek, Mys Schmidta/Ryrkarpii and Providenya which are vital ports for NSR in the area.

p. 36 - more explanations are needed for fig. 6, and the note 18, which mentions « the number of fig 7 for 1989) », is incomprehensible.

p. 37 - the meaning of the right column of fig. 7 is not very explicit.

p. 43 - the gold mine in the area of Providenya does not appear on map 3, p. 20.

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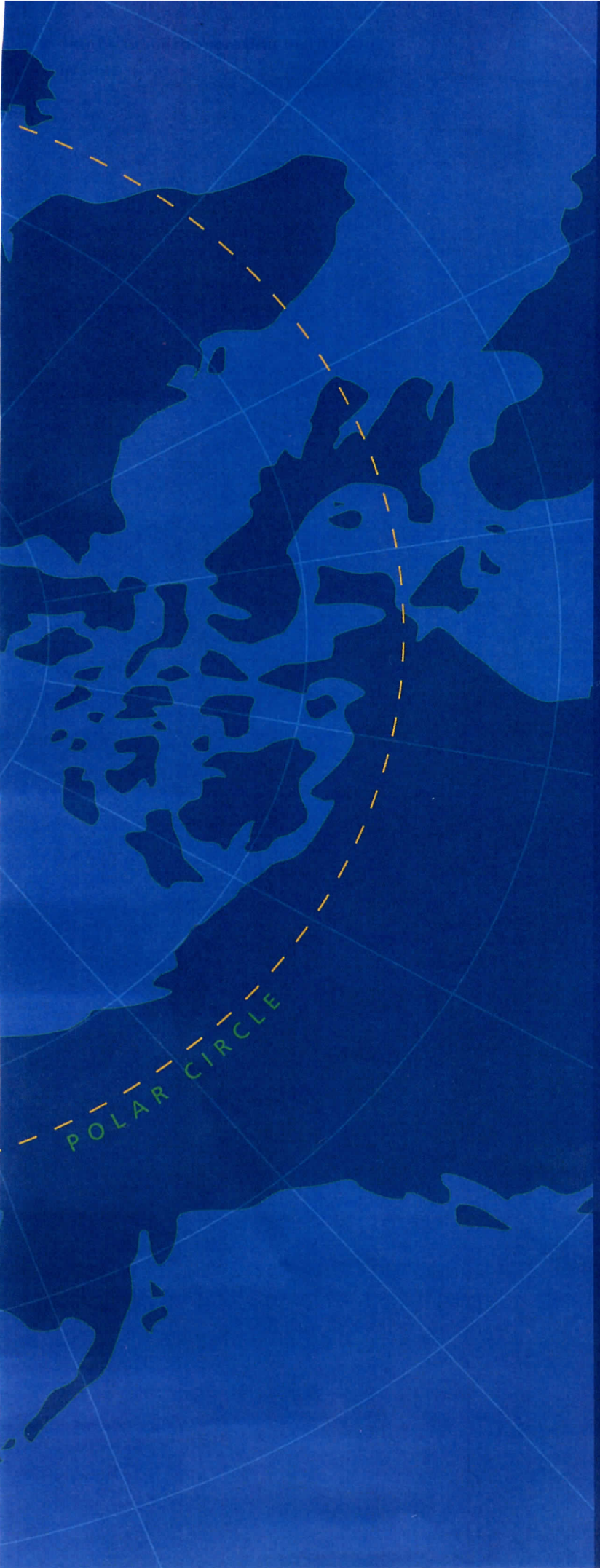

The three main cooperating institutions of INSROP

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 improvment 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 spesializes 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.