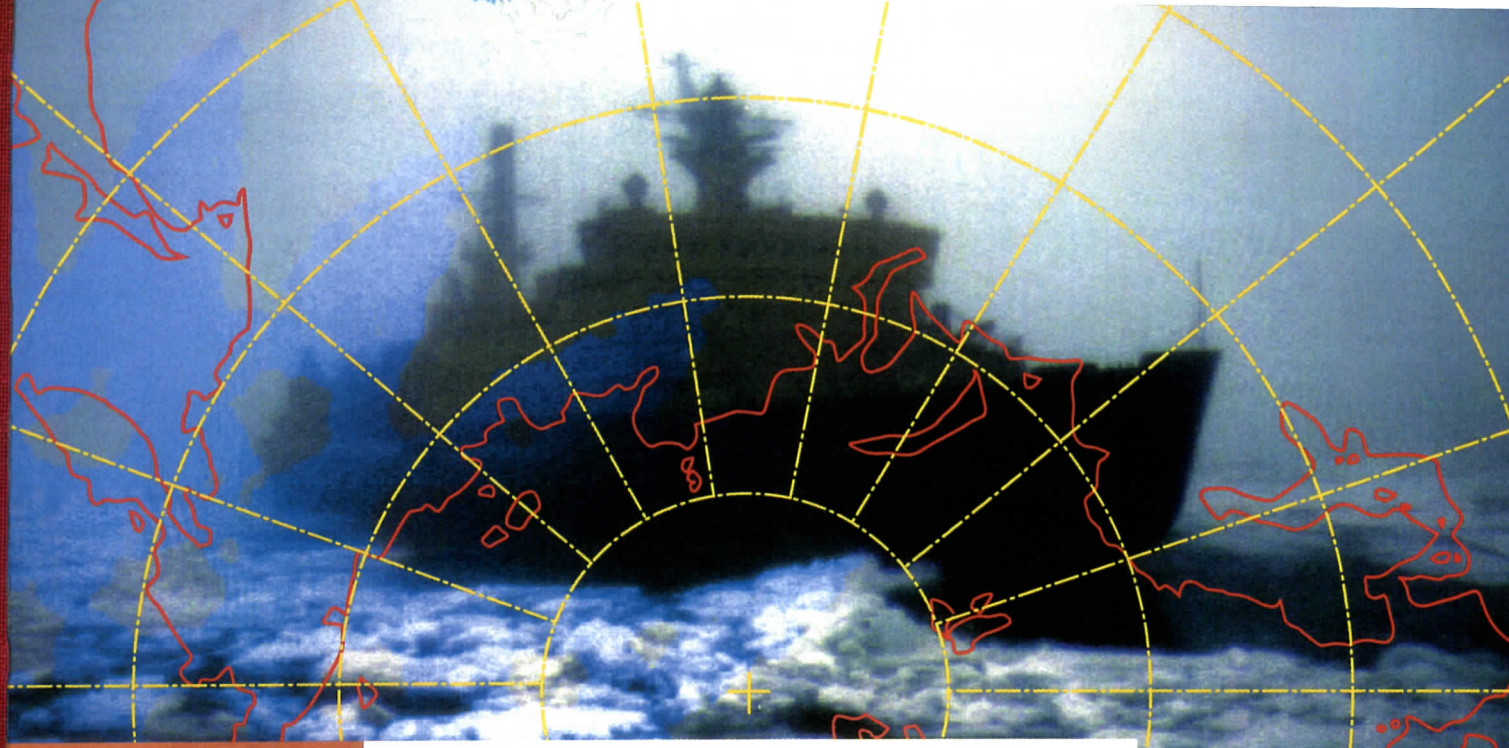

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The Russian Far East Region – Cargo Potential for the NSR?

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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 decisionmaking concerning the use of the Northern Sea Route for transit and regional development.

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

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TROND R RAMSLAND – SYNERGY RESEARCH

THE RUSSIAN FAR EAST REGION

CARGO POTENTIAL FOR THE NSR ?

PROJECT III.01.6

INSROP WORKING PAPER NO 158 - 1999

1 INTRODUCTION - THE RUSSIAN FAR EAST AREA

1.1 DEFINITION OF THE ADMINISTRATIVE REGIONS

The Russian Far East is more than a general term describing the East Russia or Russia in the Far East, and a clearly defined region to which a group of independent Russian federal subjects belong. The Russian Far East is defined as the land mass east of East Siberia and consist of ten separate administrative regions; The Republic of Sakha, Amur Oblast, Khabarovsk Krai, Jewish Autonomous Oblast, Primorsky Krai, Magadan Oblast, Chukotka Autonomous Okrug, Koryak Autonomous Okrug, Kamtschakta Oblast and Sakhalin Oblast.

To the North the region border the Laptev and East Siberian Sea, to the North East the Bering Strait and Alaska – Aleutian area, to the East the Pacific Ocean, North Korea and Japan and to the South the Peoples Republic of China and Mongolia.

The key approach to evaluate the Far Eastern Region is not that of a cargo-generating base for the Northern Sea Route as westbound traffic. The key approach is to what degree a significant shift in allocation, or lack of, federal resources has shifted the economic focus towards regional co-operation both within the Far Eastern Administrative Area and Asian Pacific Economic Co-operation (APEC) area. Such a regionalisation is likely to diminish the need for domestic Russian inter-area transportation on the one hand. On the other hand it could accentuate competition between the federal administrative areas in the same Far and South East Asian markets if the raw material base in existing production, or on the base of proven reserves, is identical. If this is the case, the Russian Far East would probably in most cases be in a better position to serve the Asian market at more competitive prices than the rest of the Federation.

It thus seems proper to evaluate the region as an economic separate unity that is served by the Federation on an inter-linked logistics mode through the Trans-Siberian Railway (TSR). The same TSR serve the regional needs, but is clearly insignificant in terms of geographic coverage. Particulars for each federal subject should also be emphasised as the subject to some extent could determine the legal framework for domestic and foreign investors, pertaining that a cargo base exists, and thus the modus operandi and attractiveness.

2 THE REGIONAL ECONOMIES

2.1 THE FAR EAST ADMINISTRATIVE AREA : FOREIGN INVESTMENTS 1998

Table 1 : Russian : Foreign Investments 1998 (Jan-Sept Annualised) 000' USD

			Type of Investment		
	Total Received	% of Total	Direct	Portfolio	Other
Russia	9 286 100	100	2 013 600	192 000	7 080 500
Far East	388 060	4,2	160 241	2 499	225 320
The Sakha Republic	129 408	1.4	818		128 590
Sakhalin Region	84 923	0,9	80 747		4 176
Primorsk Krai	59 591	0,6	22 758	2 499	34 334
Magadan Oblast	46 028	0,5	41 945		4 083
Kamchatka Oblast	41 178	0,4	7 181		33 997
Of Which Koryak AO	7 146	0,1	7 146		
Khabarovsk Krai	26 593	0,3	6 453		20 140
Amur Oblast	339		339		

Source : Russian State Custom Statisitics 1998

From the table above it is clear that if the regional potential is measured against the Russian Federation in terms of the amount of foreign investments it attracts, the 4,2 % of the total do not measure up to the size of the area, nor the nearby market potential. In this context it is necessary to emphasise that the basic approach to foreign capital allocation in Russia has been along two axes.

- To serve and generate returns by approaching the purchasing power of the domestic market, for which either domestic concentration of capital and -/ or population is a necessity.

- To approach Russia's raw material base for further developments, for which the present logistic infrastructure has been both the opportunity and constraint.

Related to the first this obviously would lead to a focus on the European part of the Federation, where population density is significantly higher, and traditionally access to production facilities, warehousing and economies of scale to name a few factors essential, are present to a much higher degree.

Related to the second, the infrastructure has been more of a constraint than an opportunity.

If viewing the overall allocation of capital to Russia's energy sector to date, much focus has been given to upgrade existing refineries to yield higher grades petroleum products, and quite some small to medium scale joint ventures has been entered into, in the production of crude oil. None however, have been of a scale or scope to reflect the actual potential of the sector, but more reflects the general risk perception of foreign investors.

Also in terms of export markets, the infrastructure of pipelines thus leave few alternatives but the use of the existing westbound export through the Druzbha to central Europe (47 %) or terminals in the Black and Baltic Sea (53 %). For a more thorough comment on this issue see INSROP Working Paper no 144 (Ramsland 99) and no 102/130 (Kryukov 99). Quite some transportation of crude oil and oil products by railwagons do however take place, but was more accentuated in the early years after privatisation in 1992-95. This mode also dominate Russian export of these products over Far Eastern ports that lack pipeline connection and associated production. However, an issue not to be disregarded and that should be more prominent in an overall approach to Russia, is that its history of utilising its natural abundance is long, and that Russian entities are quite capable at this task.

Foreign Investments thus only partially reflect the overall significance of the region. The Far East also has quite some bargaining power in that it control the trans-shipments points in the TSR and Baikal Amur Mainline (BAM) end nodes in the Vanino and Vladivostok area. This is more likely to be a prominent issue at the intra-regional level between the Far East subjects, than an issue at federal level. But one should note that East Siberia, and in particular Krasnoyarsk Krai and Irkutsk Oblast are significant stakeholders in the port operations in the form of export of metals and cellulose. For a more thorough analysis of this issue, see INSROP Working Paper no 157 (Ramsland 99).

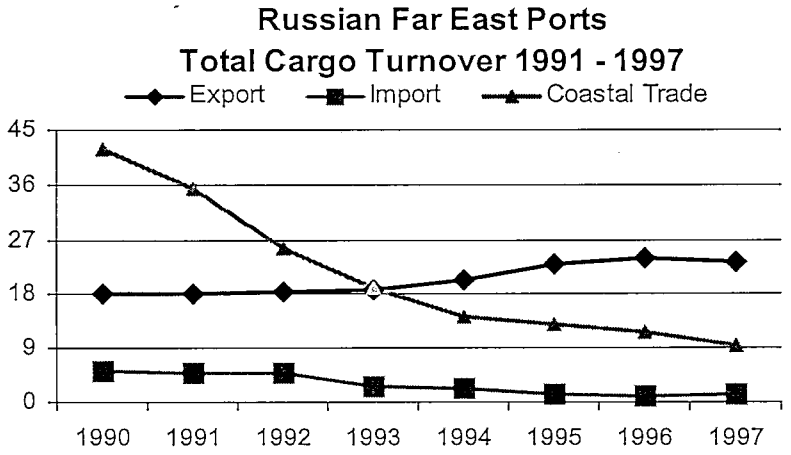
2.2 The Far East Administrative Area : Total Cargo Turnover 91 - 97

In terms of the administrative area, forestry is an industry that is an obvious resource, but others may be important. To determine the industries that do compete successfully, with or without foreign investments, an analysis of the aggregated turnover in the Far Eastern ports is probably the best measure. Beside this, the only trade leakage of significance not covered would be by rail to China, which must be assumed to harmonise in composition of commodities as the mode of rail on the first hand is used from the interior to the ports.

Table 2 : Russian Far East Cargo Turnover 1991-97 (Million Tonnes)								
Accumulated	1990	1991	1992	1993	1994	1995	1996	1997
General Cargo		12,1	11,5	10,9	11	12	12,1	10,6
Containers		3	2,5	2	1,5	0,6	0,5	0,6
Breakbulk		19,5	16,5	10,9	10,6	10,6	11	9,8
Of Which :								
Freight on Railroad Ferry		6,5	5	3,8	3,5	2,5	2	2,1
Timber		6	5,3	5,5	5,5	5,8	6,1	6
Oil Products		3,7	2,9	2	1,4	2,2	2	1,8
Fishing Ports (Cargo through-put)		2,9	. 2	1,5	1	0,8	0,5	0,2

Source : Russian Far East Update– Russian State Custom S. 1998

By analysing the development of total shipments over the Russian Far Eastern ports, there are significant messages to the outside world. First one observe that cabotage (coastal traffic) has declined sharply from 1990 to 1997. This is clearly an indication that the Federal will to re-supply and create demand for shipping services along coast has diminished. Secondly, it proves the point of regional independence, if though at an involuntary implementation. Thirdly one notes that exports has steadily increased from 1993, at the same point in time as imports decline. The time lag between the start of decline in the Federal (regional) economy as measured by cabotage levels is at least three years.



By most other statistics the general decline in overall transportation levels started 1987-88, INSROP Working Paper no 135 (Granberg 99). Thus it is clearly indicated that the contraction in the economy reduce domestic demand. This and lower purchasing power shifts production into exports and new markets. At the same time a declining currency reduces both the competitiveness and ability to import foreign products, which is a classic scenario for a small factor abundant economy. One observe that overall break-bulk and oil products volumes are halved between 91 and 97, whereas Railroad ferries, primarily to

Sakhalin, are reduced to 1/3. General cargo and Timber are fairly stable and thus underscores that volumes are stable, but that the destination has shifted from domestic intra-regional to foreign export shipments.

2.3 Russia : Total Export of Key Far Eastern Products 1998

The significance of forest product exports in terms of generation of foreign exchange revenue to the overall Russian federal budgets can be seen below. Generally, overall exports are by 75 % to the area outside the Commonwealth of Independent States (CIS), and a 25 % to the inside. The Far East is also less industrialised than the European and Central part of Russia.

There also exist import restrictions in the Far Eastern countries, in particular as regards imports of forest products into Japan. This to protect the domestic industry and local saw mills. These issues are subject to bilateral talks between Russia and Japan, and a separate forum, The Japanese Association for Trade with Russia and Central-Eastern Europe (ROTOBO), is an interest organisation through which these issues normally can be discussed at informal levels. At formal levels the Japanese Ministry of International Trade and Industry (MITI) produce guidelines. The framework for the trade has historically been solved through barter deals, where Japanese forestry equipment has been traded for logs based on so-called KS agreements.

However, direct investments in the forestry sector by Japan have not yet reach significance. As of april 97 the last KS-agreement, KS-4 a two part approach, was a credit line of USD 100 Million to facilitate the purchase of machinery and equipment, and a schedule for the imports of 3 million cubic metres of logs to Japan for the period 1998 – 2002. On the Japanese side four trading companies are involved, of which the most significant are Nissho Iwai and Nichimen. Russian exporters and purchasers are Dalles, Rosexportles, Exportles and Dalexportles. The central – regional issue is also confronted here, where Exportles is Moscow based and the previous "Soviet" sole responsible export organisation, whereas Dalles and Dalexportles where created by the Khabarovsk Krai local Dallesprom producer to gain control over the export of indigenous logged timber.

A disadvantage for Far Eastern producers is the price setting for the whole of the exports contract period, a system determined by the Ministry for Foreign Economic Relation, which leaves marginal scope for flexibility and spot arrangements. In periods of contracting economies this would force overall prices down, or reduce volumes, as buyers are reluctant

to enter into large fixed contracts. In terms of the Japanese bargaining position, especially Finnish producers of forest machinery have been competitive to serve the market, and less reluctant to enter into agreements. During the period of 1994-96 significant operations were set up in Khabarovsk by Scandinavian investors. Second-hand Finnish equipment was obtained at low prices due the devaluated Marka and the recession in the Finnish economy.

The export out of the eastern ports must thus be assumed tilted towards round timber as the main foreign exchange earner. Annualised volumes for federal exports during the 1st quarter of 1997 was export of 17 million cubic meters, which compares to 6 million tonnes of timber over the eastern ports in 1997. A reasonable assumption should be that about 25-30 % of accrued Russian timber exports could be ascribed to the Far East Administrative Area. As refers to cellulose and sawn timber, this would be included in the break-bulk volumes and normally shipped in fewer quantities than logs.

Table 3 : RUSSIA TOTAL EXPORT & KEY FAR EASTERN COMMODITIES (1ST Quarter 97-98 Annualised)

	1st Quarter 1998				1st Quarter 1997			
	Volume 000'	USD Mill		Unit Price	Volume 000'	USD Mill		Unit Price 98 % of 97
Total Exports		70 447,6	100,0 %			82 438,8	100 %	
To Outside CIS		53 697,2	76,2 %			65 972.0	80 %	
To CIS		16 750,4	23,8 %			16 466,8	20 %	
Of which :								
Round Timber, '000 m3	18038,8	934,8	1,33 %	51,8	17 107,6	1 185,6	1,44 %	69,3
To Outside CIS	17874,8	925,6	1,31 %	51,8	16 892,0	1 172,8	1,42 %	69,4
To CIS	164	9,2	0,01 %	56,1	215,6	12,8	0,02 %	59,1
Lumber		494,8	0,70 %			552,4	0,67 %	
To Outside CIS		446,0	0,63 %			499,2	0,61 %	
To CIS		48,8	0,07 %			53,2	0,06 %	
Cellulose	895,2	317,6	0,45 %	354,9	1 046,8	369,6	0,45 %	353,0
To Outside CIS	854,8	299,2	0,42 %	350,1	1014	350,4	0,43 %	345,7
To CIS	40,4	18,4	0,03 %	454,3	32,8	19,2	0,02 %	580,8
Plywood, '000	744,8	249,6	0,35 %	335,3	622,8	209,2	0,25 %	336,1
To Outside CIS	733,2	244,4	0,35 %	333,2	606,4	202,4	0,25 %	333,9
To CIS	11,6	5,2	0,01 %	467,4	16,4	6,8	0,01 %	415,4

Source :– Russian State Custom Statistics 1998

In terms of overall significance, forest product account for 2,83 % of overall foreign exports generation, for which round timber account for 1,33 %. By volume and value it is thus obvious that this industry is more important to the regional economy than to the federal total.

In terms of accounts receivables in 1998, industry account for 25 % of the accrued Russian

budgets, whereas forest products account for 2,98 % which roughly conform to overall foreign exchange earning of 2,83 %. The industry is heavily privatised and the role of Federal State as a purchaser is insignificant as measured by proportion of outstanding debt.

2.4 Russia : Accounts Receivables by Industry Sector 1998

Table 4 : Russia : Accounts Receivable By Industry Sector 1998 (Jan - October Annualised) Mln Rbls

	No of Enterprises	Receivables	No % of Total	Rec as % of Total	Customers	Promissary Notes	State Customers	For more than 3 months
Total	72 207	987 637	100 %	100 %	848 809	5 729	57 219	817 755
Industry	17 403	511 857	24 %	52 %	438 891	3 091	38 339	403 289
Forest Products	2 150	8 677	2,98 %	0,88 %	6 879	49	84	7 219
Ferrous Metals	207	26 352	0,29 %	2,67 %	19 621	24	177	20 608
Nonferrous Metals	316	18 585	0,44 %	1,88 %	12 141	533	132	12 157
Chem & Petrochem	471	24 451	0,65 %	2,48 %	21 381	63	476	20 455
Engineering Metal Processing	4 608	75 392	6,38 %	7,63 %	63 483	633	12 048	58 456

Source : Russian State Custom Statistics – Interfax Newsagency 1998

However, the Far East Administrative Area in terms of overall significance and relative position of the economy, is probably better reflected by the accounts receivable and payable, than by the amount of foreign investments. In terms of both accounts they amount to about 7 % of total, and thus indicate that the domestic regional industries are more than able to generate the necessary economic activity.

In terms of industry concentration, we see that the forest products industry do have a much high number of enterprises than for example the metals industry. It should not be unreasonable to state that the consolidation in other export oriented industries as the crude oil, refining and metals industries, not yet has been established in forest products. Over time one should expect this happen, which would increase both profitability and attractiveness.

It terms of direction it unlikely that we observe inter-regional Russian trade in these commodities, as the Central and Western Russian economies are factor abundant in the same natural resources. Notable exceptions are key high value, low volume industries that produce gold, diamonds and other essentials, but export oriented commodities.

2.5 The Far East Administrative Area : Accounts Payables & Receivables 1998

Table 5 : Russia : Accounts Receivables & Payables as 01 October 1998

	Accounts Receivable				Accounts Payable			
Mln Rbls	Total	% of Russia	Of Which Overdue	% of Russia	Total	% of Russia	Of Which Overdue	% of Russia
Russia	1 142 000	100 %	673 000	100 %	711 000	100 %	384 000	100 %
Of which :								
Far East Adm Area	76 668	6,71 %	53 858	8,00 %	49 452	6,96 %	34 287	8,93 %
Primorsk Krai	17 668	1,55 %	10 890	1,62 %	10 715	1,51 %	7 790	2,03 %
Republic of Sakha	17 332	1,52 %	10 543	1,57 %	8 386	1,18 %	5 141	1,34 %
Khabarovsk Krai	13 936	1,22 %	10 130	1,51 %	12 351	1,74 %	7 010	1,83 %
Kamchatka Oblast	7 386	0,65 %	6 042	0,90 %	4 895	0,69 %	3 766	0,98 %
Koryak AO	276	0,02 %	215	0,03 %	657	0,09 %	86	0,02 %
Magadan Oblast	6 888	0,60 %	5 949	0,88 %	4 886	0,69 %	3 868	1,01 %
Sakhalin Oblast	6 228	0,55 %	4 554	0,68 %	3 482	0,49 %	2 667	0,69 %
Amur Oblast	4 547	0,40 %	3 189	0,47 %	2 979	0,42 %	2 392	0,62 %
Chukotka AO	1 950	0,17 %	1 881	0,28 %	1 630	0,23 %	1 554	0,40 %
Jewish AO	734	0,06 %	678	0,10 %	128	0,02 %	100	0,03 %

Source : Russian State Custom Statistics 1998

The subject attractiveness and ability to turn the natural factor abundance into profitable enterprises, are more illustrated by the regional balance of profit and losses. Whereas for example the Krasnoyarsk Krai contribute a balance of 40 % of the federal total, the reverse picture is the case for the whole of Far East Administrative Area. The only significant area that returns profits is the Khabarovsk Krai, which probably partly can be ascribed to the operation of the two only refineries, one Sidanco operated in Khabarovsk and one Rosneft operated in Komsomolsk na Amur. The refineries are in a near monopoly position and sell at world market prices or above. Also the refinery in Angarsk and Achinsk serve the Far Eastern market, but at a price.

Table 6 : Russia : Financial Results in Enterprises & Organisations, 01 October 98

Mln Rbls	Balance of Profit & Losses	Profits	Proportion Profit. Enterprises	Losses	Proportion of Loss-making
Russian Federation	7 726,0	98 412,0	48,6	90 686,0	51,4
Of Which :					
The Far East	-4 337,0	5 129,0	39,8	9 466,0	60,2
Of Which :					
Khabarovsk Krai	1 199,0	3 068,0	41,0	1 869,0	59,0
Amur Oblast	173,0	344,0	37,2	171,0	62,8
Chukotka AO	29,0	49,0	30,0	20,0	70,0
Republic of Sakha	-4,0	552,0	33,8	556,0	66,3
Jewish AO	-166,0	9,0	24,1	175,0	75,9
Kamchatka Oblast	-217,0	154,0	31,3	371,0	68,7
Of Which Koryak AO	-128,0	4,0	33,3	132,0	66,7

Magadan Oblast	-1 364,0	231,0	36,7	1 595,0	63,3
Sakhalin Oblast	-1 693,0	158,0	34,6	1 851,0	65,4
Primorsk Krai	-2 294,0	564,0	51,4	2 858,0	48,6

Source : Russian State Custom Statistics – Interfax Newsagency 1998

2.6 The Far East Administrative Area: New Energy Projects as of 1999.

High regional energy prices, also observed at above world market price, is a paradox in the worlds most energy rich country, and most likely to contribute to lack of profitability in the independent federal subjects. Both the current lack of crude oil and constraints in refining capacities are important. This however, is not a situation that should be expected to prevail for too long based on the proven reserves and interest shown by western companies. Shown in the table below, are projects on offshore Sakhalin for which Production Share Agreements will be applicable for Sakhalin 1-3 as of January 99.

The Federal Russia would obviously gain from the implementation of these projects, as the regional economy will be in a better state to support itself, and become a contributor to the federal profit balance. By the current direction of Russian crude oil exports, this will not be competitive but complimentary export to the Far Eastern markets (- INSROP WP no 144 Ramsland 99).

Table 7 : RUSSIAN FAR EAST ENERGY SECTOR : CRUDE OIL PRODUCTION

Current & Planned Projects Involving Western Participation - Pending Production Share Agreements (000')

Project	Russian Partner	Western Partner	Nationality	Location	Rec Res
Sakhalin-3	Rosneft-Sakhalinmorneftegaz	Mobil, Texaco, Exxon	United States	Sakhalin	NA
Sakhalin-4	Rosneft-Sakhalinmorneftegaz	ARCO	United States	Sakhalin	NA
Sakhalin-5	Rosneft-Sakhalinmorneftegaz	British Petroleum	UK	Sakhalin	NA
Sakahlin-1	Rosneft-Sakhalinmorneftegaz	Exxon	United States	Sakhalin	772 000
Sakahlin-2	Rosneft-Sakhalinmorneftegaz	SODECO	Japan	Sakhalin	
Sakhalin-2	None	Sakhalin Energy/Shell	UK/Netherlands	Sakhalin	100 000

Source : Russian Petroleum Investor 1998

The issues to be confronted are thus others than the abundant factor allowance in energy and its natural resource base. Logistics, legal framework, geography and relative positions to demand areas are important factors. In terms of the Federation whole, there are projects pending for which there are abundant potential and sound business plans. The process follows two separate tracks;

- Focus on the periphery to realise new fields from scratch so as to avoid the old Soviet infrastructure, and reduce the Federal (Central) bargaining position on tariffs etc.

- Focus on central areas where the size and concentration of reserves are large enough to justify upgrading or new pipelines structures, and the scope and scale of investments correspondingly high to offer the necessary leverage versus the Federal Government.

To the periphery strategy, obviously the Sakhalin area projects are in perfect fit as it avoids Continental Russia, is offshore based for which the Russian entities has no or marginal technological proprietary knowledge, and is closely situated to the major demand markets. As a periphery region Sakhalin thus has attracted the largest interest, and the quantified recoverable reserves in current projects on hold amount to 872 million tonnes of crude oil. The long run equilibrium should thus point towards a well-balanced regional supply in the Russian Far East if only a fraction of the potential is realised, but access to capital has been, and will continue to be the key constraint to realise energy projects. In terms of competition and investor preferences, the projects involving western companies and pending Production Share Agreement approval by the Duma and Federation Council are in terms of regional allocation shown below.

In terms of crude oil, the Far East is not dependent on the Sakhalin only, there exist a number of concentrated structures and seismic results, although no drilling has taken place in these regions as of yet. The table below serves however to illustrate that reserves are spread along the whole of the Far East offshore areas.

Table 8 : The Russian Far East : New Offshore Petroleum Resources as July 98

OKHOTSK SEA	Area sq km	Est Resources (mln tonnes)	Exploration Status (2D km)	Identified Structures	Priority Structure
Sakhalin Offshore	280 000	4 500	215 000	80	Astrakhanskaya, Myginskaya, South Khinskaya, Central Pogranichnaya
Kuriles Offshore	22 000	500	6 000	8	
Khabarovsk Offshore	196 000	4 000	115 650	54	East Aleksadrovskaya, Usanginskaya, Yemolaisaya, Inskaya
Magadan Offshore	156 000	4 500	36 000	30	Kiraskaya, Dukchinskaya, Likhachevskaya, Umanskaya, Zavlayovskaya
Kamchakta Offshore	206 000	5 000	34 200	40	Umanskaya, kalsvayamskaya, Krutogorskaya, Penzhinskayza
Chuckchi AO Offshore	45 000	1 500	33 000	22	Tsentralnaya, Beringovskaya, Vasilyevskaya
East Siberian Sea	300 000	20 000	10 500		
Total	1 205 000	40 000	450 350	234	

Source : Russian Petroleum Investor - Russian Far East Update 1998

For the development of these resources a preliminary "Master plan" has been drafted at federal and area level. This was done in response to a joint decision on January 25 1995 of

the then "State Committee for Geology and Underground Resources" involving all the federation subjects in the administrative area. The plan envision that the above-mentioned deposits should yield an annual output of 30-40 million tonnes of crude oil and 60-70 billion cubic meters of natural gas. Neither the resources nor the accessible market are constraints, but allocation of capital and legality will be the eating that proves the quality of the pudding.

2.7 The Far East Administrative Area : Gold Production

The Far East Administrative Area also holds abundant reserves of precious metals. In terms of production of gold, the distribution is as shown below. The Area produced 71 and 68 % of Russia's total gold in 1995 – 96. This attracts interest to the mining sector, but does not influence shipping demand and or supply. However, these sectors have attracted quite some attention of international cartels and upmarket finance institutions, in particular as the potential quantities are too large to be disregarded in the world markets.

To facilitate such investments The Federation Council, the upper house of Russia's parliament, has approved amendments passed by the Duma on the "Law on Precious Metals and Gemstones". Mineral developers should be allowed to contract and subcontract by agreement, and to lease their machinery. Before the new amendments, license-holders could only operate by their own resources with no lease opportunity. This has obviously been a system to which sub-optimal allocation of capital must have taken place, qualified manpower unused.

Table 9 : Russia : Gold Production 1995 – 96 Tonnes

	1995	1996
Republic of Sakha	22,7	17
Magadan	18,1	15,7
Amur	8,1	8,1
Chukotka	7,3	6,5
Khabarovsk Krai	6,5	6,2
Chita	5,4	4,2
Primorsky Krai	0,3	0
Koryak AO	0,3	0,2
Sakhalin	0,1	0,1
The Far East Administrative Area	**68,8**	**58**
Others	27,7	28,9
Russia Total	96,5	86,9

Source : Russian Far East Uptdate 1998

Based on the 1996 annual figures, the general direction of trade for the Far Eastern

Administrative Area are as shown below. In terms of export market China dominates as followed by Japan, imports are dominated by the United States followed by South Korea.

Table 10 : Far East AA Exports & Imports 1996 (mln USD)

	Exports	Imports
China	747	208
Japan	737	146
South Korea	334	278
United States		425
Others	432	584
Total	2 250	1 641

Source : Russian Far East Update – Khabarovsk Krai Statistics 1998

2.8 The Far East Administrative Area : External Trade by Products & Partners

By Products, Forest Products as earlier indicated is the most important segment, followed by energy products, mainly oil products, and some minor volumes of coal and fish. The previous comments on the effects of a contracting economy and diminishing purchasing power are confirmed by these figures as we se that export values increase, whereas import values decrease. Imports are spread around a larger spectre of commodities with the exception of food that dominates. The overall trade balance is positive as expected from the previous and should not be anticipated to have changed by 1997-98, rather to the contrary.

Table 11 : Russian Far East External Trade : Key Commodities 1995 – 96 USD million

	Exports		Imports	
	1995	1996	1995	1996
Wood & Wood Products	471	412	22	23
Energy	305	366	85	101
Fish Products	235	225		
Food			599	594
Metals Fe & Non Fe	146	124	42	96
Minerals & Concentrates	92	62		
Petrochemicals	42	41	71	85
Others	363	1.020	950	739
Total	1.654	2.250	1.769	1.638

Source : Russian Far East Update – Khabarovsk Krai Statistics 1998

3 PRIMORSKY KRAI

3.1 GENERAL INFORMATION

Area	165 900 square km
Population	2 253 000
Administrative Centre	Vladivostok

3.1.1 GEORGRAPHY

The Primorsky Krai is situated in the southernmost part of the Russian Far East. It borders Khabarovsk Krai in the north, China and Democratic People's Republic of Korea in the west and southwest. On the east the Sea of Japan. Within the region there are 25 counties (rayons), 12 towns, 46 urban settlements. The largest cities are Vladivostok 659 000, Nakhodka 193 000 and Ussuriysk 162 000.

3.1.2 CLIMATE

Forests cover two-thirds of the region's territory. There are about 1,8 billion cubic metres of timber resources in the region. In the classification of climates the region falls generally into the temperate monsoon type. Winter is short and frosty. Summer is dull with heavy rainfalls and frequent cyclones. The record low temperature is -54 degrees Celsius, the absolute maximum 41 degrees Celsius. The annual precipitation ranges from 600 to 900 mm with 90% of it falling during summer.

3.1.3 NATURAL RESOURCES & INDUSTRY

The most important mineral resources include tin, polymetallic ores, tungsten, gold, fluorite, coal, building materials. The leading industries are fishing, non-ferrous metallurgy production of tin, tungsten and other rare earth metals, wood and wood-working industries, machine building and metal working mining and chemical industry.

Besides the prospects in the crude oil sector for investment and production, it is the mineral sector that has attracted the most attention from both domestic and foreign investors. In particular precious metals have attracted lots of interest, but in terms of the NSR and inter-linkage between the federal areas it is insignificant in terms of trade evaluation. However, the

most imminent fields up for tenders are shown below.

Table : 12 Primorsk Krai Auction & Tenders for Minerals Prospecting and Production 1999

Property District	Mineral	Reserves	Type Date of Competition	Licensed Activity
Glukhoye Krasnoarmeisk	Lode Gold	50 t	Public Tender, 1999	Exploration, Mining
Askoldovskoye Island of Askold	Lode Gold	8.9 t	Closed Tender, 2000	
Yagodnoye Ternei	Lode Gold	9.4 t 111 t	Public Tender, 2000	
Kumirnoye Ternei	Silver	500 t		
Spyuznoye - Olga	Silver	750 t		
Zimneye Krasnoarmeisk	Lead, Zinc, Silver, Tin	1.15 mln t ores, 169,000 t		
Kabardinsky Section Lesozavodsky	Diamonds	1 t		Prospecting, Exploration, Mining
Ariadnenskoye Ore Dalne Rechensk	Titanium (Ilmenite)	800 mln t		Exploration, Mining
Orekhovskoye Dalne Rechensk	Brown Coal Open pit	136.8 mln t		Mining
Vikinskoye Pozharsky	Brown Coal	120 mln t		

Source : Interfax Mining & Metal Review 1998

3.1.4 AGRICULTURE

The main agricultural branches oriented to the local market include production of meat, dairy farming, pig growing, poultry, vegetable and potatoes.

3.2 PRIMORSKY KRAI : TOTAL CARGO TURNOVER 1991 – 97

Table 13 Primorsky Krai Mln Tonnes	1991	1992	1993	1994	1995	1996	1997
General Cargo	6,2	6,3	8,7	9,2	9,2	9,1	8,1
Break-Bulk	12,3	10,7	7,8	7,7	7,6	7,8	7,5
Containers	2,5	2	1,8	1,3	0,4	0,4	0,5
Of which :							
Metals	1,5	3,3	5,6	7,6	8,6	8,5	7,4
Machinery & Equipments	1,7	1	1,3	0,3	0,2	0,1	0,1
Timber	3,5	3	2,5	2	1,6	1,4	1,3
Oil Products	5	4	4,5	4	4,1	4,2	4
Fishing Ports	3	2,6	1,9	1,7	1,9	1,1	1
Of which Fish Products	2,5	1,8	1,3	0,8	0,5	0,4	0,3
Total	30	26,6	25,4	24,6	24,7	24,8	21,9

Source : Russian Far East Update –Primorsky Krai Statistics 1998

The transport infrastructure consists of all means of transportation: roads, railways and airways. The region's transport network density is the highest in the Russian Far East. The Trans-Siberian Railway, goes via the Primorsky Krai to the Pacific ports Vladivostok,

Nakhodka, Vostochny and Posyet. In terms of cargo throughput in the main ports, the overall development in the region is reflected.

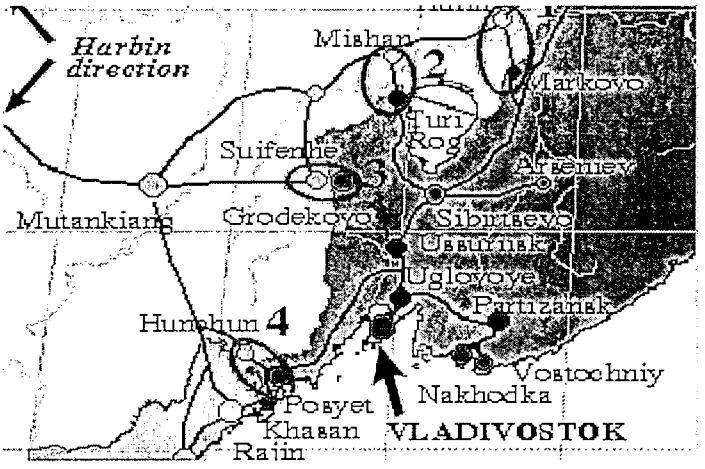
Table 14 : Primorsky Krai
Balance of External and Domestic Seaborne Trade 91 – 97 (Mln Tonnes)

	1991	1992	1993	1994	1995	1996	1997
Exports	12,5	12,6	15,6	17,5	19,4	19,4	19,2
Imports	4,4	4	2,1	1,8	0,7	0,6	0,5
Cabotage	13,1	10	7,7	5,3	4,6	4,8	2,2

Source : Russian Far East Update –Primorsk Krai Statistics 1998

3.2.1 THE TUMEN RIVER AREA DEVELOPMENT PLAN

The Tumen River Economic Development Area (TREDA) is a regional development plan pivoting around the Tumen river at the Chinese, North Korean and Russian crossroads. The plan envisions development into a three-nation trade and development zone for which the extension of railway links is a key issue. Two railway links, the Suifenhe-Pogrinchny railroad and the Hunchun – Kraskino connects China with the Southern ports of Primorsk Krai.



Current cross-border trade at the Far East – Chinese border is 1,5 mln tonnes at Markovo-Hulin (1), 2,0 mln tonnes at Turi Rog-Mishan, 6,0 at Grodekovo-Suifeihe and 6 mln tonnes at Kraskino-Hunchun crossing. Thus quite some trade leakage occur on expense of cargo throughput in ports by railway links. Considering the overall Chinese cargo concentration in its more southern ports, and the upgrading of Dalian port (Port Arthur) to accommodate increased import-export for the Heilongjiang (Harbin) province, its is not likely that the transit potential arising from these will shift nor be accentuated. In particular as the capacity aims at

economies of scale container carriers for up to the Post-Panamax segment.

As a framework for regional co-operations and a confidence building measure, the concept is however noteworthy, but the overall development of the zone is still way ahead of realisation. Related to the Primorsk, it is the ports of Posyet, Kraskino and Zarubino that will be affected.

3.2.2 VLADIVOSTOK PORTS 1991 - 97

Vladivostok port follows the general picture with a decline in overall volume. Notable features are that the grain imports have diminished whereas metals exports have substituted the overall decline in grain volume. Metals export is mainly aluminium exported from Krasnoyarsk and Bratsk Aluminium Plant in Krasnoyarsk Krai and Irkutsk Oblast. The import - export thus has been accentuated in the segments for which Russia and the FE AA have a comparative advantage.

Table 15 : Vladivostok - AO Vladmor-Rybport
Total Seaborne Trade Turnover 1991 – 97 (000' Tonnes)

	1991	1992	1993	1994	1995	1996	1997
General Cargo	2344	2151	2777	2795	3300	3266	2920
Break Bulk	2212	1590	930	1252	407	170	108
Containers	600	330	215	185	230	288	350
Of which :							
Metals	470	1010	1550	2500	3000	3030	2500
Grain	1725	1370	700	1010	230	137	55
Timber	10	25	30	90	150	260	260
Other	1200	800	1000	110	62	21	70
Cargo Total	4570	3766	3737	4237	3857	4079	3388

Source : Russian Far East Update –Primorsky Krai Statistics 1998

As observed from the tables below fisheries export over ports have been significantly reduced, not as a consequence of scale stock reduction in the Russian Economic zone, but as both factory trawlers and trawlers serve the export markets directly in Japan, South Korea and China. Factory trawlers, in particular from the United States have purchased quotas directly from the license holders in the Far East. The federal authorities as budgetary transfers normally allocate quotas, and regional authorities and combinates either trade these in barter deals or sell them directly to generate foreign exchange.

Table 16 : AOZT Vladmor - Rybport
Total Seaborne Trade Turnover 1991 – 97 (000' Tonnes)

	1991	1992	1993	1994	1995	1996	1997
Fish Products	1200	850	500	220	230	177	140
Cargo Total	1550	1150	850	500	570	462	520

Source : Russian Far East Update –Primorsky Krai Statistics 1998

Table 17 : Vladivostok AO Vladmor – Rybport Balance of External and Domestic Seaborne Trade 1991 – 97 (000' Tonnes)

	1991	1992	1993	1994	1995	1996	1997
Exports	1370	1099	1654	2700	3200	3264	2850
Imports	2102	1710	1075	1050	350	423	346
Cabotage	1098	957	1017	487	307	392	192

Source : Russian Far East Update –Primorsky Krai Statistics 1998

Table 18 : Balance of Cargo Throughput 1991 – 97 (000' Tonnes)

Exports	13	50	150	200	280	142	345
Imports	0	0	0	20	50	90	75
Cabotage	1547	1100	700	280	240	230	100

Source : Russian Far East Update –Primorsyk Krai Statistics 1998

Table 19 : Vladivostok Ports Total Turnover 1991 – 97 (000' Tonnes)

Total	6130	4916	4587	4737	4427	4541	3908

Source : Russian Far East Update –Primorsky Krai Statistics 1998

3.2.3 NAKHODKA PORT

Table 20 : Nakhodkatorgport Total Cargo Turnover 1991 – 97 (000' Tonnes)

Nahodka	1991	1992	1993	1994	1995	1996	1997
General Cargo	1090	2050	3500	4200	4240	4500	4002
Break Bulk	3011	3170	950	650	180	50	105
Metals	850	2000	3225	4140	4200	4445	3822
Timber	1750	2000	1150	992	921	892	850
Grain	1250	1850	165	0	0	0	0
Others	158	260	298	262	190	136	0
Total	6020	7480	5898	6104	5531	5578	4957

Source : Russian Far East Update –Primorsky Krai Statistics 1998

Table 21 : Nahodkha Port : Balance of Cargo Through-put 1991 – 97 000' Tonnes

	1991	1992	1993	1994	1995	1996	1997
Exports	3 90	5 115	5 321	5 867	5 402	5 497	4 875
Imports	1 760	1 675	459	207	111	78	72
Cabotage	870	690	118	29	18	2	10

Source : Russian Far East Update –Primorsky Krai Statistics 1998

Table 22 : Nakhodkarybport Cargo Turnover – 1991 – 97 000' Tonnes

Fish Products	1	1	0	0	0	0	0
Total Nakhodka Dry Cargo	1 227	910	890	520	600	626	566

Source : Russian Far East Update –Primorsky Krai Statistics 1998

Table 23 : Nakhodkanefteport Cargo Turnover 1991 – 97 000' Tonnes							
Exported	1 520	1 260	500	850	900	1 500	2 300
Cargo Turnover Total	5 050	4 050	4 450	4 000	4 100	4 161	3 983
Nakhodka Total	12 297	12 440	11 240	10 624	10 230	10 365	9 496

Source : Russian Far East Update –Primorsky Krai Statistics 1998

3.2.4 VOSTOCHNY PORT

As of January 98 it has been proposed to trans-ship Chinese coal from Heilongjiang, by the way a Chinese bulk segments for transit to Europe, over the port of Vostochny. The proposal stems from excess capacity at Vostochy at the same time as constraints with significant laytime have been experienced in Chinese ports. A significant reduction of transit and cargo handling fee must be assumed the only, but a major incentive. One should thus observe that a major difference exists between high priority container shipments in high value goods, and that of a transport sensitive, and low cost commodity as coal.

Table 24 : Vostochny Port Total Cargo Turnover 1991 – 97 000' Tonnes							
	1991	1992	1993	1994	1995	1996	1997
Containers	1 900	1 700	1 650	1 104	175	100	96
General Cargo	2 010	1 900	2 480	1 996	1 013	803	650
Breakbulk	6 282	4 700	4 540	5 870	7 290	7 545	7 316
Of which :							
Metals	15	80	220	550	750	630	500
Machinery	35	50	70	75	60	30	24
Chemicals & Fertilizers	40	60	90	100	100	80	30
Coal	5 992	4 500	3 640	5 319	6 841	7 400	7 240
Timber	498	604	780	210	195	126	116
Cargo Turnover Total	8 790	7 204	7 800	8 076	8 499	8 475	8 082

Source : Russian Far East Update –Primorsky Krai Statistics 1998

For 1997 the total transhipments of Chinese coal over Vostochny accrued to 400 000 tonnes. Although a significant spare capacity exist in the terminal at Vostochny, estimated at 12 million tonnes per annum, Chinese trans-shipments must still be double handled, as the railway system in China and Russia operates on different rail gauge. The coal thus also face handling at the border point, which must be a constraint as it would require massive investments to upgrade a land transfer for the spare capacity. Rather than undertaking such, it would seem more logic that China develops its own coal handling terminals. An annual volume of ½ to 1 million tonnes over Vostochny is probably the best educated guess in terms of potential stable volumes.

Table 25 : Vostochny Sea Port :

Balance of Cargo Through-put 1991 – 97 (000'Tonnes)

	1991	1992	1993	1994	1995	1996	1997
Exports	6 970	5 187	6 400	6 960	7 932	8 235	7 828
Imports	430	592	500	449	46	40	56
Cabotage	1 390	1 425	900	667	521	200	198

Source : Russian Far East Update –Primorsky Krai Statistics 1998

4 KHABAROVSK KRAI

Area	788 600 square km
Population	1 557 000
Administrative Centre	Khabarovsk

4.1.1 GEOGRAPHY

The Khabarovsk Krai is located in the central part of the Russian Far East. It borders the Primorsky Krai and Jewish Oblast in the south, the Amur Oblast, the Sakha Republic in the west, the Magadan Oblast and to the south. Its ports fringe the Sea of Okhotsk and Japan. The Khabarovsk Krai comprises 17 counties (rayons), 7 towns, and 31 settlements.

4.1.2 CLIMATE

About three-quarters of the area are formed by mountains and plateaux lying 500 to 2500 metres above the sea level. The climate is monsoon with cold winter and moist and hot summer. It varies significantly from north to south and also is influenced by proximity to the sea and topography. In January average temperatures range from - 22 C in the south to -40 C in the north, and from -18 C to -24 C for coastal areas. In July average temperatures range from +20 C in the south to +15 C in the north. Annual amount of precipitation is 400 - 600 mm in the north, 600 - 800 mm in the plains and eastern slopes of the mountains and over 1000 mm in the mountains.

Khabarovsk Krai is perforated by rivers to which the main part belongs to the basin of Amur, beside the Lena, the major river in the Far East Administrative Area.

4.1.3 NATURAL RESOURCES & INDUSTRY

Mineral resources include tin, mercury, iron ore, black and brown coal, graphite, brucite, manganese, feldspar, phosphor and alunite. The region's major industries include machine building and metal working, non-ferrous metallurgy, wood, wood-processing and paper and pulp industries, oil refining, chemical and fish industries.

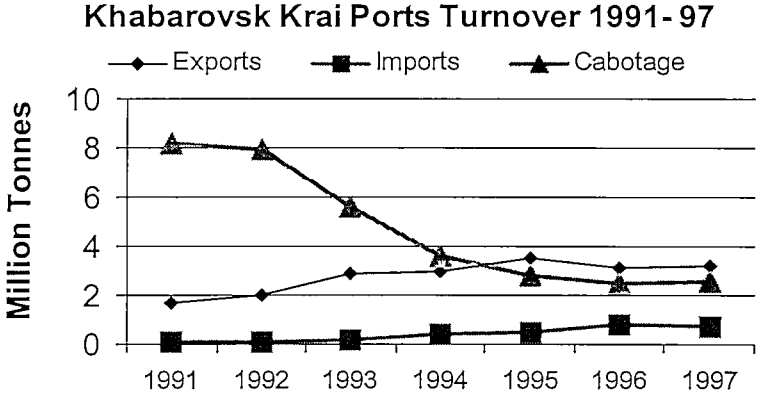
4.1.4 AGRICULTURE

Cattle and pig breeding are well developed in the region. In the north, the main specialisation

is reindeer breeding. The most important crops are grain, soybean, potatoes and vegetables.

4.1.5 ECONOMY

The Khabarovsk Krai is a transit territory for many overland, waterway and airway routes connecting the central part of Russia with the ports on the Pacific Ocean, former CIS countries, Western Europe and the Pacific Rim (APEC) countries.



4.2 KHABAROVSK KRAI - TOTAL PORT TURNOVER

Table 26 : Khabarovsk Krai Total Seaborne Trade 1991 – 97 Million Tonnes

	1991	1992	1993	1994	1995	1996	1997
General Cargo	2	2	1,9	1,2	1	1,3	1,4
Ferry Cargo	5,3	4	3,7	2,5	2,2	1,8	1,7
Break Bulk	1,5	1,3	1,3	1,5	1,6	1,4	1,4
Timber	1,1	1	0,9	0,8	0,6	0,5	0,5
Oil Products	0,1	0,3	0,5	0,8	1,1	1,3	1,4
Other Cargo -		0,4	0,4	0,4	0,5	0,1	0,1
Cargo Total	10	9	8,7	7,2	7	6,4	6,5

Source : Russian Far East Update – Khabarovsk Krai Statistics 1998

Table 27 : Khabarovsk Krai Balance of Cargo Through-put 1991 – 1997 (Million Tonnes)

	1991	1992	1993	1994	1995	1996	1997
Exports	1,7	2	2,9	3	3,5	3,1	3,2
Imports	0,1	0,1	0,2	0,4	0,5	0,8	0,7
Cabotage	8,2	7,9	5,6	3,6	2,8	2,5	2,6

Source : Russian Far East Update – Khabarovsk Krai Statistics 1998

4.2.1 VANINO PORT 1991 – 1997

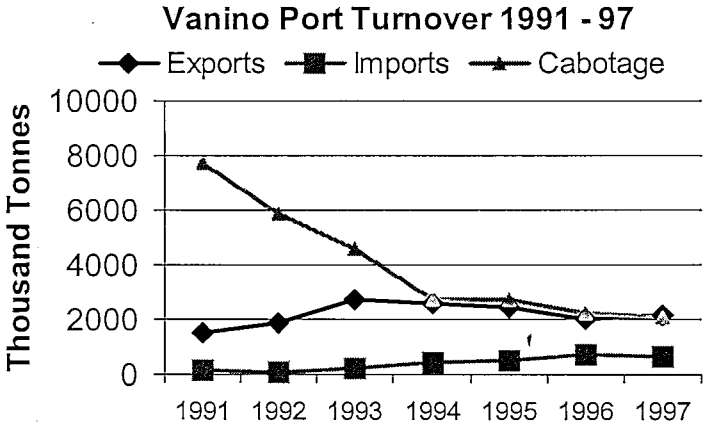


Table 28 : Vanino Port : Total Cargo Turnover 1991 – 97 (000 Tonnes)

	1991	1992	1993	1994	1995	1996	1997
General Cargo	1648	1799	1790	1100	1000	1250	1370
containers	170	150	100	50	10	30	55
Breakbulk	1516	1276	1300	1500	1600	1400	1350
Of which :							
Coal	1390	1160	1220	1100	900	500	500
Timber	880	750	690	550	500	500	450
Others	5331	4042	2700	2500	2360	1820	1758
Cargo Total	9375	7807	7500	5700	5600	4970	4930

Source : Russian Far East Update – Khabarovsk Krai Statistics 1998

Table 29 : Vanino Port : Balance of Throughput 1991 – 97 (000 Tonnes)

	1991	1992	1993	1994	1995	1996	1997
Exports	1527	1860	2700	2600	2400	2020	2160
Imports	116	105	200	400	500	750	670
Cabotage	7732	5847	4600	2700	2700	2200	2100

Source : Russian Far East Update – Khabarovsk Krai Statistics 1998

The storage capacity at Transbunker has been increased from 25 000 to 150 000 cubic

meters. By 1995 Vanino handled 1 120 million tonnes for which 900 000 tonnes where exported. The main function of the bunker terminal besides exports is to re-supply local maritime activity in the Sea of Okthotsk. Volumes have increased steadily since 1992.

Table 30 : Vanino & Sovyetskaya Gavan
Port : Balance of Throughput 1991 – 97 (000 Tonnes)

	1991	1992	1993	1994	1995	1996	1997
Transbunker	N/A	N/A	550	800	1120	1300	1420
Vanino & Sovyetskaya Gavan	9750	8300	8180	6680	6820	6300	6400

Source : Russian Far East Update – Khabarovsk Krai Statistics 1998

In particular the "mini-ports" have suffered from the reduction in cabotage along the littoral of the Far East. This should at the current state in the economy be assumed to have levelled, though at a marginal volume of once experienced.

Table 31 Throughput Nikolayevsk na Amur
Port : Balance 1991 – 97 (000 Tonnes)

	1991	1992	1993	1994	1995	1996	1997
Nikolayevsk na Amur - Timber	600			350	100	75	50
Mago-Fish & Breakbulk	45			30	30	25	20
Okhotsk - Fish & Breakbulk	245			50	25	20	20
De-Kastri - Timber	150			100	50	40	50
Total Miniports	1040			530	205	160	140

Source : Russian Far East Update – Khabarovsk Krai Statistics 1998

4.3 The Regional Refineries 1997

The two refineries at Khabarovsk and Komsomolsk are the only significant in the region. The yield of gasoline is, as the rest of Russia's refined output, low compared to western values. Consequently the product worth for a refined unit of crude oil is lower, and probably leads to overprice of high yield grades in the local market. Normal western values are 75-85 % light products whereas the yield at the Khabarovsk is 47 % and 51 % at Komsomolsk. The Khabarovsk refinery must source its crude by rail from the Angarsk region, obviously a non-cost effective logistics.

Table 32 : Khabarovsk Krai Refining Throughput 1996 – 97 000'Tonnes

Company Refineries	Processing		Yield as of dec 97			
	1997	1996	Mazut	Gas Oil	Gasoline	Jet Fuel
Sidanco Group	16 123	18 142	5 163	3 640	2 277	666
Khabarovsk	**1 859**	**2 230**	**666**	**423**	**294**	**165**
Kha % of Sidanco Total	12 %	12 %	13 %	12 %	13 %	25 %
Angarsk (Sidanco)	10 651	13 919	2 406	2 225	1 657	501
Kriking (Sidanco)	3 619	2 457	2 086	991	325	0
Rosneft	4 812	4 956	1 724	1 311	465	124
Komsomolsk	**2 370**	**1 750**	**1 213**	**971**	**108**	**124**

Komos % of Rosneft Total	49 %	35 %	70 %	74 %	23 %	100 %
Krasnodar	155	387	62	0	5	0
Tuapse	2 287	2 824	449	336	351	0

Source : Russian Petroleum Investor 1997

5 SAKHALIN

5.1 GENERAL BACKGROUND

Area	87 100 square km
Population	719 000
Administrative Centre	Yuzhno – Sakhalinsk

5.1.1 GEOGRAPHY

The Sakhalin Oblast lies in the easternmost part of the Russian Far East covering the Island of Sakhalin and the Kurile Islands. The region comprises 17 counties (rayons), 19 towns and 35 settlements.

5.1.2 CLIMATE

Sakhalin is one of the largest islands in the territory of Russia. From north to south the island extends for 948 km. Its greatest breadth is about 160 km and in its narrowest part the island has the width of about 30 km. The island's total area is 76,4 thousand square kilometres. Roughly two-thirds of the island's area is mountainous with the highest point the Lopatin peak rearing to 1609 metres. The northern part of the island is a swamp plain covered by larch forest. There are two volcanoes, more than 60 thousand streams and about 16120 lakes on the island. The climate is temperate monsoon. Average temperatures for January range from - 6 degrees Celsius in the south to -24 degrees Celsius in the north. For August the average temperature is + 19 degrees Celsius in the south and + 10 degrees Celsius in the north. The annual precipitation ranges between 600 and 1200 mm. In the north of Sakhalin the cold period lasts from October to May, in the south from November to April. In summertime the region is subject to frequent typhoons.

From north to south the Kurile Islands extend for 1200 km. Their total area is about 15,6 thousand square kilometres. All islands, 30 large and over 20 small, of the Kurile archipelago are of volcanic origin. Prevalent heights are 500-1000 metres. There are about 160 volcanoes, of which 40 are active, more than 4000 rivers and brooks and a great number of lakes. The climate is mild and humid maritime without severe frosts and summer heat. The fogs and rainfalls are frequent weather hazards during summertime. The annual precipitation ranges from 1000 to 1400 mm.

5.1.3 NATURAL RESOURCES & INDUSTRY

Mineral resources include stone and fuel coal, oil, natural gas, sulphur, titan iron sands.

In terms of industry this is mainly to serve the regional need and include fishing, paper and pulp industry, energy (oil, coal). Sakhalin largest logger, Sakhalinlesprom, export timber primarily to Hokkaido in Japan and account for about 50 % of the total Hokkaido imports. Sakhalinlesprom is controlled by the Rosexportles subsidiary Rusexportles.

Offshore developments are centred on the Sakhalin 1-5 developments indicated previously. Exxon is operator on Sakhalin 1 (Arkutun Dagi) with a 30 % stake, Sakhalin Oil & Gas Development Company (SODECO) has 30 %, Sakhalinmoreneftegaz has 23 % and Rosneft Sakhalin 17 %. The Arkutun Dagi lie in 40 - 45 meters of water 20 km to the northeast of Sakhalin and is probably the first to become operational.

5.1.4 AGRICULTURE

The region's location in unfavourable geographical and climatic conditions means that it is not self-sufficient in staple agricultural products.

5.2 CARGO TURNOVER & TRANSPORTATION 1991 - 97

Practically all the cargoes to Sakhalin and the Kuril Islands are transported by sea. On the total there are 11 seaports in Sakhalin. The railway network of the Sakhalin Island consists of 925 kilometres of railroads, which connect almost all settlements on the island. There are 7 airports in the Sakhalin Oblast. The traditional link to mainland Russia is through the Vanino - Kholmsk ferry. The area trade in terms of regional output has no significance for the NSR. A significant reduction in total through-put has been experienced both at Kholmsk and Korsakov.

However see the chapter 2 for long term implication of the offshore crude oil and natural gas sector.

Table 33 : Sakhalin Throughput Port : Balance 1991 – 97 (000 Tonnes)

	1991	1992	1993	1994	1995	1996	1997
Kholmsk							
Rail – Ferries					2367	1820	1758
Timber					100	100	84

Coal		80	70	67
Other		30 -		49
Cargo Total	6040	2577	1990	1958

Source : Russian Far East Update –Sakhalin Oblast Statistics 1998

Table 34 Throughput Korskakov Port : Balance 1991 – 97 (000 Tonnes)

General Cargo	470	100	132	190
Timber	450	220	185	110
Coal	820	150	165	120
Others	280	25	100 -	
Cargo Turnover Total	2020	495	582	420
Other Miniports	1400	200	150	170
Total Sakhalin Ports	9460	3272	2620	2548

Source : Russian Far East Update –Sakhalin Oblast Statistics 1998

6.2 TRANSPORTATION

Two largest railways pass through the region: the Trans-Siberian Railway that provides access via the Khabarovsk Krai to the ports of the Primorsk Krai and the Baikal-Amur Mainline (BAM) - to the ports Vanino and Sovetskaya Gavan. There are four river ports in the region that handles the export-import operations with China. Moreover, the Amur river provides access to the Sea of Japan, using the "river-sea" class vessels. The airport in Blagoveschensk has obtained international status.

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7 The Jewish Autonomous Oblast

7.1 General Information

Area	36 300 square km
Population	210 000
Administrative Centre	Birobidzhan

7.1.1 Geography

The Jewish Autonomous Oblast is located in the southwest of the Russian Far East. It shares borders with Khabarovsk Krai in the east, Amur Oblast in the west and China in the south. The district comprises 5 counties (rayons), 2 towns, an administrative centre of the oblast (Birobidzhan) 12 urban and 47 rural settlements.

7.1.2 Climate

The Jewish Autonomous Oblast is known to have the most favourable climatic and natural conditions of the whole Far East. The region is subdivided into a mountainous and a plain area. The climate is moderate, monsoon. The winter is cold with little snow (average temperatures range from - 25 to - 40 degrees Celsius). The summer is warm and moist. The plain area gets 450-500 mm of precipitation per annum, of which 75 percent are recorded during the period from May to September.

7.1.3 Natural Resources & Industry

The flora of the region comprises hundreds of plant species and medicinal herbs. The taiga is rich in berries, mushrooms and nuts. The fauna and wildlife in the region is varied: there are the brown and Himalayan bear, Nepal marten, fox, mink, sable, boar, moose, Manchurian deer, pheasant and different species of the duck. The five state natural preserves occupy 225 thousand hectares or 6% of the region's area.

The Jewish Autonomous Oblast holds the prospected and proven deposits of more than 20 minerals, including large deposits of iron ores, manganese, tin, gold, graphite, brucite, magnesite, zeolite, building materials. The region's major industries include machine building, metals working, wood-processing, light and food industries. Of recent interest are

tenders for rights to develop gold in the Oblast. To the Northwest in the Maly Khingan field the tender include license to four sites in the Genrikhovsky River valley and its Bezymyanny tributary. Reserves at a total 673 kilograms of gold. The licenses will run from 1999 through 2008 to 2012. Other industrial projects have not been identified.

7.1.4 AGRICULTURE

The climatic and soil conditions in the region are favourable with a sufficiently long vegetation period, high average temperatures and fairly frequent rainfalls during the warm season. A number of crops can be cultivated, dairy farming, cattle breeding and production of poultry facilitated as the leading segments of agriculture. Agricultural land covers 391,1 thousand hectares, including 136,1 thousand hectares of arable land.

7.2 TRANSPORTATION

The region is located in close proximity to China in the Asia/Pacific region and has access to the Sea of Okhotsk Pacific Ocean through the Amur River. The Trans-Siberian Railway passes through the region, providing itineraries to and from Western Russia and the eastern ports.

8 Magadan Oblast

8.1 General Information

Area	461 490 square km
Population	363 000
Administrative Centre	Magadan

8.1.1 Geography

The Magadan Oblast is located in the northeast of the Russian Far East, bordering the Okhotsk Sea. The region shares borders with the Sakha Republic in the west, Khabarovsk Krai in the south, Chukotka Autonomous Okrug in the north and Kamchatka Oblast in the east. The region comprises 16 counties (rayons), 1 town under regional authority (Magadan) and 3 municipal towns, as well as 52 urban settlements.

8.1.2 Climate

The region has severe temperature conditions. Winter is long and lasts from November to March. Vegetation period lasts just 100 days a year, which hampers the cultivation of crops.

8.1.3 Natural Resources & Industry

The region is rich in mineral resources: gold, silver, tin, tungsten, mercury, copper, antimony, coal, oil, peat, building materials. The seas and woods are inhabited by valuable species of fish and animals. The main industries include mining (70% of the region's production output), fishing, electric power generation, machinery repairing, manufacture of building materials, food (dairy products, meat) and light industry. Gold and silver mining is the key industry in terms of profit generation, but produce minimal shipping requirements.

8.2 Transportation

Railway transport is non-existent. The region's transportation system includes motor vehicle, sea and air transport. The roads extend for a total of 2 645 km.

9 KORYAKSKIY AUTONOMOUS OKRUG

9.1 GENERAL INFORMATION

Area	472 300 square km
Population	411 000
Administrative Centre	Petropavlovsk - Kamchaktiy

9.1.1 GEOGRAPHY

The Kamchatka Oblast occupies the Kamchatka peninsula, the adjoining part of the mainland, the Commodore Islands and the Isle of Karaginskiy. Its boundaries run on the Okhotsk and the Bering Seas. The region lies to the south of the Magadan and Chukotka Autonomous Okrug. It comprises 11 counties, 3 towns and 11 settlements.

9.1.2 CLIMATE

The climate is monsoon. In summer, warm days with the temperature exceeding 20 degrees Celsius are rare, ranging from 1-6 on the coast to 30 in the mainland to 35-55 in the valley of the Kamchatka river. There are more rainfalls in Kamchatka than in any other region of Russia, with a year divided into a dry and a damp season. In the south of the peninsula, on the mountains slopes there is much more rain (up to 2500 mm) than in the Central Kamchatka Lowland (400 mm) which is protected from cyclones by the Sredinniy and Vostochniy ranges. On the northeast coast the precipitation is 500-600 mm.

9.1.3 NATURAL RESOURCES & INDUSTRY

Mineral resources include various kinds of thermal and coking coal gold, silver, mercury, ores and sulphur. The leading sectors of industry include fishing, timber and woodworking industries, coal extraction for local use, manufacture of building materials, non-ferrous metals and food processing for local use.

9.1.4 AGRICULTURE

Reindeer breeding represents the agriculture of the Kamchatka Oblast, a traditional activity of the native people and the agricultural production based on crop cultivation, cattle farming

and grazing. The latter accounts for 90% of the region's gross agricultural output. The main produce includes potatoes, cabbage, fodder, milk, eggs, meat and other products.

9.2 Cargo Turnover & Transportation

The most important means of transportation are marine and air transports.

Table 35 : Petropavlovsk Kachatskiy Cargo Turnover 1000' Tonnes

	1991	1992	1993	1994	1995	1996	1997
General Cargoes	1000			300	350	400	
Breakbulk	1400			370	164	150	
Others	140			120	42	108	
Oil Handling Ports	2540			790	556	658	540
Fishing Ports				210	150	75	65
Oil Handling Ports Total				150	90	110	100
Kamchakta Total				1150	796	843	705

Source : Russian Far East Update –Kamchakta Oblast Statistics 1998

10 THE SAKHA REPUBLIC

10.1 GENERAL INFORMATION

Area	3 103 200 square km
Population	1 081 000
Administrative Centre	Yakutsk (212 000)

10.1.1 GEOGRAPHY

The Republic of Sakha (Yakutiya) is covered by permafrost; 44 percent of its territory is located within the Arctic Circle. Sakha has extreme weather conditions, with cold, dry winters and very short summers. Average temperature range from - 40C in January to13 C in July. Temperatures in the city of Verkhoyansk can range from extremes of -70 C to + 35 C, and Yakutsk from –64 C to 38 C. The Republic comprises 35 districts and 2 municipal settlements. Besides Yakutsk major cities of Republic are Neryungry (76,000 people), Mirny (40,000), Lensk (31,000) and Aldan (26,000).

The Republic of Sakha is characterised being perforated by rivers, all that eventually fall into the East Siberian and Laptev Sea. Consequently all links waterways links to the Northern Sea Route. The Lena River is the main water artery (4,400 km. long). It's the only transportation network and it crosses the Republic from the South to the North. From the Southern part of the Republic to Yakutsk there has been built a railway link 360 km long connecting the Republic with the Trans-Siberian line and the ports of the Pacific ocean.

10.1.2 NATURAL RESOURCES AND INDUSTRY

The rich deposits of diamonds are located on the West and Northwest regions, gold and silver on the East, oil and gas in the centre and Southwest region of Republic, almost all the territory covers rich deposits of iron-ore, tin and coal. The largest companies in terms of capitalisation (billion roubles) are the diamond producer Almazy Rossiy-Sakha (na), gold producer Aldanzoloto (na), energy companies Sakhaneftegaz (820), "Yakutgazprom" (520), "Yakutskenergo" (812),"Yakutugol" and gold producer "Sakhazoloto" (n/a).

Diamonds are Sakha's most valuable natural resource. In 1994, Sakha mined $1.27 billion worth of rough diamonds; almost all have been exported via Moscow. Explored reserves of

coal are 4.4 billion tons, of which two-thirds is low -quality Neryungri coking coal. The coal is however located at disadvantage versus most markets. An iron-ore deposit located in the republic's southwest has estimated reserves exceeding 2.5 billion tons, or 80 percent of the Russian Far East total. The Republic also has the RFE's sole known phosphate deposit of 30 million tons of apatite ores, containing 6.7 percent P2O5.

Sakha currently exports the majority of its diamonds uncut. Regional officials seek to increase diamond cutting to raise hard currency income, and a recent agreement with the Russian Government permits the republic to keep for its own use 20 percent of mined diamonds and 11.5 percent of mined gold. For realization of large investment projects, the Federal Diamond Center has been founded by the Moscow Central Bank and Sakha enterprises of diamond industry and other companies. Sakha mines a quarter of Russia's gold (about 30 tons).

10.2 ENERGY PROJECT (S)

10.2.1 YAKUTSK ENERGO.

In 1994 "Yakutskenergo" was privatised into Open Joint-Stock Company. The main activities are thermal and electric production. In 1996 "Yakutskenergo" produced a total of 7 438 billion kwhrs based on coal and gas. The main consumers of thermal and electric energy are industry (more than 50 %) and wholesale buyers. As the population of the Sakha Republic is small private consumption is minute.

The main shareholders are EEA Russia and employees of the enterprise. Foreign investors hold a negligible interest in the enterprise.

Table 36 : Shareholder Structure Yakutsk Energo 1998

Shareholder	Ordinary shares.	Preferen. Shares.	Total	% of Share C
Joint Stock employees	215,035,900	116,175,080	331,210	30,23
Citizens	81,319,278	51,771,605	133,090,883	12,15
State Property Man. Fund	14,649,225	0	14,649,225	1,34
EEA, Russia	536,915,416	0	536,915,413	49,00
Foreign investors	6,041,271	1,000,000	7,041,271	0,64
Others	70,527,743	2,308,598	72,836,341	6,65
Total	924,488,830	171,255,283	1,095,744,113	100,00

Source : JSC Sakha Invest 1998

10.2.2 SAKHANEFTEGAZ

Table 37 : Reserves Sakhaneftegaz	
Type	Reserves as 1996
Crude Oil 1000' tonnes	155,103
Gas Condesate 1000'	25,327
Natural gas (billion cum)	1,022,155

Source : JSC Sakha Invest 1998

"Sakhaneftegaz" was founded in 1992 pursuant to the President of Republic to enlarge and increase the base of raw materials, to insure reliable gas and oil supply and to organise production of crude oil. Sakhaneftegaz was privatised into an enterprise in 1994, the regional government holding 25% percent of the share capital. Sakhaneftegaz has right to negotiate on the use of Republican oil and gas deposits, and an exclusive right in terms of activities that involves foreign exports, none as of yet have been realised.

Table 38 : Shareholder Structure Sakhaneftegaz 1998				
Shareholders	Common shares	Preference shares	Total	% of Equity
Sakha Property Management Fund	1,616,329	0	1,616,329	28.36%
Sakha Delivery agency	470,000	0	470,000	8.25%
UKS Securities	297,381		297,381	5.22%
Legal owners	2,331,567		2,364,088	41.48%
Others	407,723	544,479	952,202	16.71%
Total	5,123,000	577,000	5,700,000	100.00%

Source : JSC Sakha Invest – Sakha Republic Statistics 1998

10.2.3 YAKUTSK GAZPROM

Table 39 : Reserves Yakutsk Gazprom	
Type	Reserves as 1996
Crude Oil 1000' tonnes	2,408
Gas Condesate 1000'	18,836
Natural gas (billion cum)	517,622

Source : JSC Sakha Invest – Sakha Republic Statistics 1998

The Sakha Republic Enterprise for extraction and transportation of gas "Yakutgazprom" was established in 1967 based on the at the time "Yakut Gas and Industrial Department". Until 1991 "Yakutgazprom" was a part of RAO "Gazprom", and was privatised in 1994. The core business of "Yakutgazprom" is to extract and process gas, oil and gas condensate to secure a stable regional supply. Four gas condensate deposits are presently in production:

Sredneviluiskoye, Mastakhskoye, Severo-Nelbinskoye and Irelyakhskoye oil and gas condensate field. The last was brought to temporary production to further supply the mining community in Mirny, but have been disbanded. Current activities are extraction and transportation of gas (79% of total revenue) whereas processing of gas condensate is increasing its proportion of total revenue. The increase of natural gas consumption is mainly increasing because of:

- Installation of gas processing in the diamond mining region (Aikhal- Udachny-Polyarny) to complete the diamond mining projects in Mirny and Udachny.
- Construction of Gas- Electric Power Station no 2 in Viluisky region.

The export of gas outside of the Republic could have a considerable influence on the rate of gas extraction, for which "Yakutgazprom" developed several options. See however comments on the Kovyakta project concerning the centre –periphery balance.

Table 40 : Shareholder Structure Yakutsk Gazprom 1998

Shareholder	No of shares	% of Equity
IF Sakhalnvest	38,996,321	19.65 %
Sakhaneftegaz	75,693,865	38.14%
Population	29,811,215	15.02%
Others	53,917,974	27.19%
Total	198,419,375	100.00%

Source : JSC Sakha Invest – Sakha Republic Statistics 1998

10.2.4 LENANEFTEGAZ

Table 41 : Reserves Lenaneftegaz 1996

Type	Reserves as 1996
Crude Oil 1000' tonnes	320,262
Gas Condesate 1000'	3,148
Natural gas (billion cum)	203,910

Source : JSC Sakha Invest – Sakha Republic Statistics 1998

"Lenaneftegaz" was privatised on the basis of a Federal Government Decree of 28 January 1994 "On reorganisation and corporatisation of oil complex enterprises of RS (Yakutia)". The core business before privatisation was geological prospecting. The main activity and potential is the development the Talakanskoye oil and gas deposit, which is the largest oil deposit in Sakha, stated at 81 million tonnes reserves. In the Lensky, Mirninsky and Suntarsky regions are natural gas reserves of about 800 bln cum. (63% of the Sakha total balance). Related to crude oil supply and refining which are the most critical issues in local terms, construction and use of the temporary pipeline "Talakan-Vitim" enabled the output of oil extraction on Talakansky deposit from 8 thsd tonnes. In 1995 to 30 700 tonnes. For 1997

it was stipulated for 70 000 tonnes extraction, for the Talakanskoye and Irelyakhskoye oil deposits. Lenaneftegaz has a license on Talakanskoye to produce 410 000 per year.

Related to the overall reserves this minute production and licence can be ascribed to the same factors as for the rest of Russia. Too high risk perception to attract foreign capital, local enterprises unable to raise finance on acceptable terms on their own, and too low purchasing power in the region to support development of the markets at the terms offered.

Table 42 : Shareholder Structure Lenaneftegaz 1998

Shareholder	Common Shares	Preference	Total	% of Equity
Staff at	35,550,232	124,718	35,674,950	29.17%
"Lenaneftegaz" administration	4,739,360	-	4,739,360	3.88%
Lensky region administration	9,739,360	-	9,739,360	7.96%
NNGK "Sakhaneftegaz"	48,340,750	-	48,340,750	39.53%
Others	3,791,260	-	3,791,260	3.10%
Company Pension Fund	20,000,000	-	20,000,000	16.36%
Total	122,160,962	124,718	122,285,680	100.00%

Source : JSC Sakha Invest – Sakha Republic Statistics 1998

10.2.5 SAKHAZOLOTO

The Company holds a controlling position on the following gold exploiting enterprises of the Sakha Republic ; JSC "Indigirzoloto", JSC "Aldanzoloto", JSC "Zoloto Yakutii", JSC "Zoloto Dgugdgura", JSC "Nezhdaninskoye zoloto", JSC of the trade firm "Sakhacontract", JSC "Sakhazolototranssnab". The representatives of JSC "Sakhazoloto" are represented on the Board of Directors on each of the mentioned enterprises.

Sakhazoloto manages and coordinates the, investments, technical issues and export of gold from the Republic. As such it is a distinction to the previous federal control of this activity. For 1997 this represented control of about 90 independent gold mining enterprises with total output of 25 tonnes.

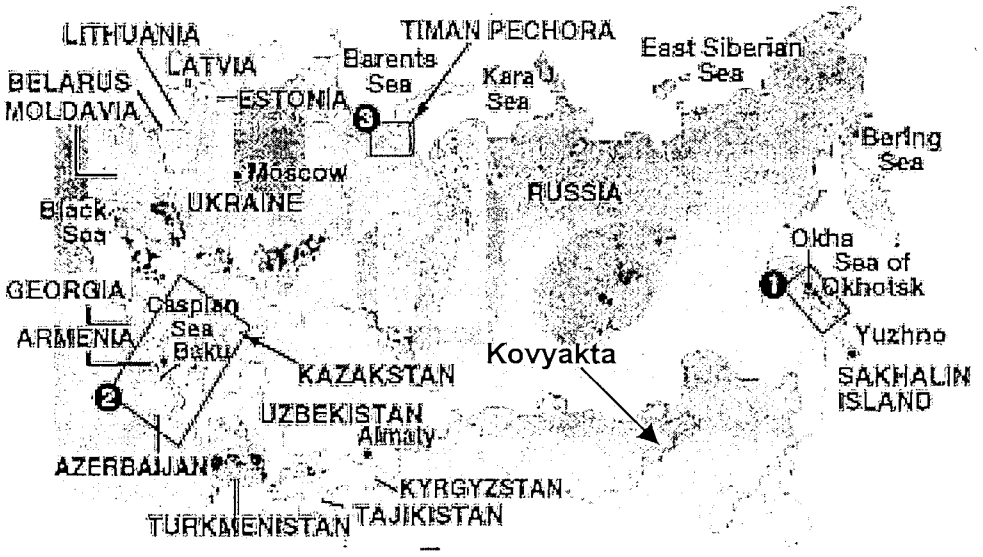
Table 43 : Shareholder Structure Sakhazoloto 1998

Owner's position	Shares quantity	% of SC
State Property Committee	2,134,491	95%
IF «Sakhalnvest"	112,342	5%
Total	2,246,833	100%

Source : JSC Sakha Invest – Sakha Republic Statistics 1998

10.2.6 KOVYTINSKOYE NATURAL GAS PROJECT

In terms of energy centre – periphery it is the Kovyakta (Kovytinskoye) field in the Sakha Republic that has attracted the most interest in the Far East onshore, and serves the centre role in terms of geography and natural gas reserves vs deliveries to China. The project will mainly compete with Kazhakstan (area 2) pipeline deliveries, and partly LNG deliveries from Sakhalin (area 1). Energy supply from the Timan Pechora Region (area 3) is at a disadvantage vs both the Sakhalin and Kovyakta for the Chinese market.



Rusia Petroleum obtained the Kovakta field licence in 1992, to which UNEXIMBANK and British Petroleum have acquired a 60,5 % interest in since. BP acquired 10 % of SIDANCO in 1997 and 20 % of the trust management voting shares, and has been appointed 10 representatives on the board of the company alongside UNEXIMBANK that is the largest stockholder in SIDANCO.

Thus in this case the influence of regional stakeholders in the Kovakta field, Yakutskenergo & Sakha administration have diminished. It seems that in terms of spot and termin delivered commodities regional stakeholders obtain a fair, if not major, share and are also able to raise capital to certain degree. Whereas for strategic deliveries with no storage potential, large scale infrastructure and fixed volumes as natural gas, the regional influence is reduced versus integrated and international companies. This can be ascribed to the necessity of

export market knowledge, experience and ability to raise capital in the international syndicated market. No regional projects have so far succeeded to raise the necessary capital to realise projects of this magnitude. The question, from the more to the less, is that of sovereign risk attributed to federal Russia that precludes the ability of federal subjects to raise capital. For a more thorough debate on the issue, see INSROP Working Paper no 144.

The consequence of Russia's sovereign creditworthiness currently downgraded, led Gazprom to set up its own offshore company as January 22 1999. This arises upon non-payment from domestic users of natural gas, which reduce both available working capital and ability to serve its debt, thus also the ability to serve the new. The new company is specifically aimed to finance and to serve the new pipeline across the Black Sea to Turkey, and allow Gazprom de facto to raise debt at better credit rating than sovereign Russia. It proves the point of collateral and secure deliveries to markets that services debt.

A framework agreement was signed between the Chinese and Russian federal government in June 1997 covering the deliveries of 30 bln cu meters to the central and northern China. In terms of a strategic mix in energy supply this project is well suited as it offers China diversification in terms of supply sources, and in particular as it substitute, or hinders implementation of new emission prone coal fired thermal power. The project direct cost in terms of local production cost in the Sakha Republic and equipment costing for pipelines should be fairly straightforward. This based on local Purchasing Power Parities as published by Goskomstat, correlated with the Federal Governments aim of 70 % local content, and cost available through actual costing from Alaska Northern Slope development. This development took place in near identical climate and by the same operator, British Petroleum.

The price setting and costing in terms of federal taxes, royalties, pipeline tariffs etc, are at the initial stage likely to be negotiate on the basis of what price the electricity supply market in the Northern and Central China is able to bear.

11 CHUKOTKA

11.1 GENERAL INFORMATION

Area	73 770 000 square km
Population	146 000
Administrative Centre	Anadyr

11.1.1 GEOGRAPHY

The Chukotka Autonomous Okrug is located in the very northeast of the Russian Federation. The coasts of Chukotka fringe the East Siberian Sea, the Chukotka Sea and the Bering Sea. To the south it borders the Sakha Republic, the Kamchatka and Magadan Oblasts.

11.1.2 CLIMATE

Average temperatures range from -15 to -30 degrees Celsius in January and from +5 to +13 degrees Celsius in July. Annual precipitation amounts to 200-400 mm. The ground is Tundra and affected by permafrost.

11.1.3 NATURAL RESOURCES & INDUSTRY

Mineral resources include gold, tungsten, tin, crude oil and coal. The richest deposits are the Valkumey and Pyrkakay deposits of tin and the Anadyr and Bering deposits of coal. Coal besides for Okrug internal consumption must be reckoned of no interest. The major interest is assumed to be the indicated offshore crude oil structures and annual catches of fish.

Chukotka industry is marginal but concentrated in mining, fishing and coal extracting. As first of 1996, the Chukotka obtained rights to fish in its adjacent quota for an annual volume of 100.000 tonnes to year 2000 by the State Fisheries Committee. The quota was sublet to Seattle based trawlers on a joint venture basis. For 1997 the catch allowed in its waters were tonnes 60.000 Alaskan pollack, 6.000 cod, 1.000 herring and 1.000 crabs.

In terms of maritime activity the turnover in ports between 1990 and 97 in the Far north are shown below. It reflects the general decline in the Arctic maritimes.

Table 44 : Cargo Turnover in the Far North Ports Chukotka & Sakha (000'Tonnes)								
Ports of the Far North	1990	1991	1992	1993	1994	1995	1996	1997
Anadyr	650	540			100	80		
Berigovskii	720	730			443	497		
					427	490		
Provideniya	200	200			50	40		
Pevek	690	710			40	25		
Tiksi	480	360			15	10		
Total	2740	2540	620		650	650	500	500

Source : Russian far East Update 1998

Activity that could be of short-term interest is seismic surveys in the adjacent waters and long term potential crude production. From the reserves indicated in chapter 2, it is obvious that the indicated reserves are of major significance, although at disadvantage in terms of production cost due to the environment. Comparatively however, they could equal or surpass Alaska in significance and should by no means be disregarded. Offshore activity in this area would also serve as a boost both for technological developments to operate safe in ice covered areas, and thus decreases the risk perception of the maritime Arctic north.

The most immediate problem however, is deliverance of oil products at acceptable rates for the regional needs. Although the major crude oil potential rest below the offshore seabed, some smaller onshore fields have been test-drilled in the lower Khatyrka Basin close to the Magadan Oblast border (Zapadno-Ozernoya, Verkhne-Echinskii and Olkhovoye). One solution to solve the oil product deficiencies is to purchase and install "mini-refineries", turn-key options available at indicated prices of USD 800.000 to 2.000.000. Both Sakhaneftegaz subsidiary Lensknefteqaz, and Magadan City have evaluated this option, and 6 have been implemented by Lensknefteqaz.

Another factor that increase the attractiveness for these solutions, is that in terms of the last amendments to the Production Share Agreement (PSA) legislation, fields with less reserves than 10 million tonnes are exempted from parliamentary approval, and ceded to regional authorities. The implication is obviously that it should be easier to facilitate terms of agreements both as regards finance and production. For Chukotka and Magadan that are distant from the centre of gravity for federal authorities, regional sourcing and export markets, this is advantageous. It is also a sanguine approach to an industry that they have no previous experience, but stand to gain significantly in local terms if implemented.

12 Conclusion

The purpose of this paper has been to evaluate the Russian Far East Administrative Area (AA) to see if the internal changes in the Russian economy could affect the identified seaborne cargo segments between the European part of Russia and the Far East. The major advantage of the FE AA is that on the one hand its proximity to the growth markets in Asia, on the other hand the area natural resource base. To its disadvantage is the high cost and long distances for certain commodities internally in Russia. The raw material base in current production is centred on forestry, fisheries and mineral extraction, and in particular production of precious metals and gemstones. Oil Products and consumer goods are the major deficiencies in the region.

A gross reduction in cabotage shipments has taken place along the Far East littoral as the federal activity and will to re-supply these remote areas has diminished. Exports have increase proportionally, as imports have declined. In short a classic scenario for a factor abundance rich open economy in contraction. Forrest products are the major commodities that are exported, for which the regional enterprises are more than capable. The main challenge is to achieve a higher proportion of local value added, which points to lack of investments in capital equipment and – or lack of foreign attention as risk is perceived too high. It also reflect high entry barriers to foreign markets, in particular in Japan where import restrictions exist on value added products.

The general lack of hydrocarbon production is the main challenge, and potential, as in particular the Sakhalin offshore developments, and the Sakha Republic gas exports, stand to be realised. This will obviously be a boost for the regional economy and solve its current high cost of oil products.

There is limited competition between the modes of transport and it is not found evidence of leakage for the NSR cargo relevant segments as exports are heavily focused on Forrest products and regional specific minerals. The major metals segment that moves over the eastern ports is Aluminium exports and bauxite – alumina imports for which the Bratsk smelter in Irkutsk and Australia is the major source. The regional geography and orientation towards Asia is likely to be accentuated on the base of the internal domestic Russian, and external Asian, trade that is observed.

REVIEW OF INSROP REPORT III.01.6:
"The Russian Far East region" by Trond R. Ramsland

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ORIGINAL BRIEF AND OVERVIEW OF RESULTS

The brief included main features such as "to identify potential cost advantages and evaluate if improved logistics can be created for the industries and regional economy. Focus must be on linkages towards ... Alaska and the US/Can West coast... The study should also emphasise the political dimension of a joint regional policy towards the use of river shipping and NSR."

With regret, I have to say that none of these points has been been met. In particular, N America is barely mentioned and the crucial role of evaluation has not been performed. In general, each topic is discussed only very briefly. Information comes with no sources, it is cast in inconsistent formats, and it lacks sufficient explanation and interpretation.

STRUCTURE OF THE REPORT

In the version which was sent to me, pages 5-17 *(p. 5-16 in final version – Editor's note)* contatin a general intruduction to the regional economy of the Russian Far East (RFE). Pages 18-48 *(p. 17-47 in final version – E.n.)* survey each district of the region in turn. Page 49 *(p.48- E.n.)* contains a conclusion. There is no bibliography.

NEED FOR MORE INPTERPRETATION AND EXPLANATION

The reader is often left needing some interpretation or explanation of why any given statement is the case. Sometimes this statement makes a judgemet about a situation, but no justification is given for this judgement. Is it the judgement of someone who has lived and worked for years in the RFE, speaking Russian, or is it the judgement of someone who has found some statistics but doesn't understand what lies behind them?

For example, the points made on p.5, paragraph 3, are correct. But it would also be helpful to have some explanation of the political background to these processes, to help the reader to judge their significance. What does the word "....probably" mean: what, why, how? This would help the reader understand the implications of this for their own shipping interest.

Again, on p.7 *(p.6 in final version – E.n.)*, infrastructure as more of a constraint than an opportunity: yes, but why? What is this infrastructure? There is a need to explain the impact of climate, terrain, population density, logistics, properties of remote areas on cargo dynamics.

On the last paragraph of p.5, the author gives a reason for discussing each district ("federal subject") separately, as these determine "the legal framework for both domestic and foreign

investors". This is potentially important, but when we get to the district-wise survey, this is not discussed.

REGIONAL REVIEW (pp.18-48) *(17-47 – E.n.)*:

The treatment of most regions is very sketchy. I shall just look at the one for the Sakha Republic, which is by far the most substantial.

To pick up the "legal framework" from the bottom of p.5: What are the constitutional structures involved? How do they relate to investment -- and cargo movement? What of the process of privatisation? What is the implication of the Sakha Republic's movement towards "sovereignty" and how does this affect revenue sharing with the federal government (mentioned, with no explanation, at the top of p.41) *(p.40 in final version – E.n)*? Sections 10.1.1 and 2 consist of the skimpiest of geographical introductions. These are followed by a series of short sections on several important mineral corporations (with undated, undiscussed tables -- Why is gold not privatised?). There is nothing about constitution or politics, nothing substantial about relations with Moscow or with other neighbouring districts. On pp.45-6 *(p.44-45 – E.n.)* there is a hint of a reason why local corporations seem to have lost out to international ones in one particular natural gas project, which it seems should be "ascribed to the necessity of expert market knowledge, experience and ability to raise capital in the internatioal syndicated market". Is the author saying that the Sakha lack these qualities? To what extent? How does he know?

The statement on p.46 *(p.45 – E.n.)* that local production costs and equipment costing for gas pipelines in the Sakha Republic "should be fairly straightforward": on what grounds is the author able to make this judgement? Are there other, contrary opinions on this? Particularly in the section on Lenaneftegaz, mention needs to be made of the engineering problems, and the cost, of dealing with permafrost. We are told about gas pipelines to China. If there is any connection to marine shipping, we are not told what this is.

What of timber, so prominent on pp.5-17 and now completely lost to sight?

Why so much emphasis on diamonds (not given a proper heading, but contained in section 10.1.2) and gold (given 8 lines and a tiny, unlabelled and incomprehensible table), also mentioned at various points in pp.5-17)? They are important to the Republic's economy (or at least diamonds are). But do they have any relevance for shipping? This is where the author's judgment should be applied, to an evaluation of the relative roles of various commodities of the Republic's economy in relation to their shipping requirements. Does the Sakha Republic have much interest at all in shipping or in the NSR, and if so, what? How much timber goes down the Lena to Tiksi? And by railway to Vladivostok? Is there scope here for "potential cost advantages and ... improved logistics" [from the briefing]? What is the value of timber to the Sakha economy? What could it be?

What has happened to coal from Nyeryungri, mentioned earlier and a commodity which definitely needs shipping to be exported? (Incidentally, this coal is surely not high quality, but of very poor grade.)

The Lena river features prominently in the briefing. In this report, it is mentioned once on p.40 *(p.39 – E.n.)* as "the only transportation network" and then never again.

One very important element is missing, among many: the role of the Lena and the NSR as a lifeline bringing in supplies for the city of Yakutsk. It remains in the balance each year whether or not the ships will come. What of the higher cost of alternative routes by air (aviation is not discussed or cross-referred anywhere in this report) or down the Lena from the railway line in the south? Is this significant for the current report? Surely it needs to be investigated in the context of developing "potential cost advantages" [words from the briefing]?

PROBLEMS WITH FIGURES

There is a problem of comparability between tables of figures (which are unnumbered, so that it is hard to refer to them succinctly). The commentary does not usually help out with this because it is so sketchy. As a result, it is very hard to form a picture of the movement and the relative importance of the various commodities.

Thus, for example, the general introduction to "total cargo turnover 1991-1997" mentions only timber in the text, adding "but others may be important". In the table at the top of p.8, timber and oil products are the only identifiable commodities. The table mixes categories of commodity with categories of transportation (containers, breakbulk, general cargo), with no indication of how far these overlap or are separate, or guidance in how to interpret these figures. Does the category "fishing ports" refer to fish products, or merely some cargo which happens to go through ports which are somehow categorised as "fishing" ports? (Is Vladivostok on p.21 *(p.20 – E.n.)* a "fishing port"? Are Nakhodka and Vostochnyy not "fishing ports" because the tables on pp.22-3 *(pp.21-22 – E.n.)* don't mention fish as a category?) Here, grain suddenly makes an appearance. Why?

Tables on later pages do not harmonise with the table on p.8. For example, the table on p.10 is headed "Russia total export and key far Eastern commodities". But the commodities mentioned are only wood products, viz round timber, plywood, and cellulose. Are these the only commodities exported by Russia? Or are they perhaps the only commodities exported by ship? Or are they perhaps the only commodities exported by ship from the Russian Far East, even though the heading talks of the whole of Russia? If so, then what of the oil products in the table of p.8? Are they related to the petrochemicals in the table on p.11 (where oil, gas and energy are missing)?

The reader is left wondering about the role of minerals such as coal and ore. Are they hidden in the transportation categories of the table on p.8? They make their first appearance in the table on p.11, "Russia: accounts receivable by industry sector 1998". Here we find ferrous metal, non-ferrous metal and engineering metal processing, alongside chemical and petrochemicals, and forest products. In the commentary we are told that "The export out of the eastern ports must thus be assumed tilted around timber". But this is not demonstrated or explained. The figures in the table on p.11 concern Russia as a whole. They show us a larger number of timber enterprises than of metal enterprises, but in the columns which presumably represent money (in roubles? dollars? millions? billions?), timber ranks much lower.

Nowhere in the report can I find figures which will allow us to compare the region's production, income or cargo volume for the entire range of relevant commodities -- except for section 2.9 *(section 2.8 in final version – E.n.)* , which presents a table on "Russian Far East

external trade: key commodities 1995-6". This simple, highly aggregated and out-of-date table covers imports and exports in US dollars for seven categories, plus a large category "others". The section has a text of just seven lines. Though this text repeats points made earlier, it does not tie up the figures in earlier sections, because they relate to different commodities and different years.

Presumably the last table in section 2.8 *(2.7 – E.n.)* (gold production) belongs in section 2.9 *(2.8 – E.n.)* (Far East: external trade by products and partners).

THE CONCLUSION

This mentions some important points which have not been discussed adequately, if at all, in the rest of the report.

Meanwhile, many important points in the original briefing, which have not been been mentioned in the report, remain unmentioned. These include the evaluation of improved logistics for the industries and the regional economy, and the role of Alaska and the US/Canada west coast (completely unmentioned), as well as "the political dimension of joint regional policies towards the use of river shipping and the NSR".

EDITORIAL POINTS

A note on the author's background would be helpful. So would the inclusion of the original briefing given to the author.

There are very many misprints and some incoherent sentences.

There is no explanation of the terms AA and AAA. The first table, on p.6, is headed "The Far East Administrative Area". Presumably this is the "AA" of several section headings -- what is this? It does not correspond with the definition of the Far East in the first para of p.5. What is the "AAA" of the heading of section 2.7 *(2.6 – E.n.)*?

Tables are unnumbered.

There are divergent endings for district names, eg Primorsk / Primorskii Krai, Kamtschatka [misspelt Kamtschakta] Oblast etc. These suggest an author who does not know Russian, and it makes the reader wonder if he has done original research on Russian sources or used 2nd and 3rd-hand sources in western languages. Such sources can be very good if you understand how to select and read them – but without a bibliography, it is impossible to tell.

There are very few references in the text (I think three). Two of these are to other INSROP reports by the same author (Ramsland 1999, not distinguished as 1999a and 1999b). But since there is no bibliography anyway, nothing can be traced.

Cambridge, 19 March 1999

Department of Shipping, Trade and Finance

Professor Costas Th. Grammenos, OBE, DSc
Head of Department
Pro-Vice Chancellor, City University

CITY University
BUSINESS SCHOOL

27 February, 1999

Claes Lykke Ragner
INSROP Secretariat
PO Box 326
N-1324 Lysaker
Norway

Dear Claes,

Re: Project III.01.6: "The Russian Far East Region", by Trond R. Ramsland

The purpose of the paper is to "evaluate the Russian Far East Administrative Area to see if the internal changes in the Russian economy could affect the identified seaborne cargo segments between the European part of Russia and the Far East."

I found the paper to be very well structures and written. It provides concise but substantial information on all the Russian Far East administrative regions and successfully addresses its aims.

The paper provides a valuable source of information on the geo-political and economic situation of the region and makes useful suggestions about the types of cargo flows that could be generated in the future.

The use of a limited number of maps was appreciated and I would encourage the author to use some more if possible. It would enhance the paper's reference value.

I will close my comments with a suggestion not on this paper but on project III.01.5 by the same author, which I also reviewed. The currently reviewed paper can be used as a template for the amendment of project III.01.5, including the suggestion that more maps should be used to illustrate the information given.

I hope my remarks will be helpful

Sincerely yours

Michael

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23 March 1999

COMMENT TO THE REVIEW OF INSROP PROJECT III.01.6

As a first comment it is clear that the two reviewers obviously have a widely different approach to the paper. The review of Tamvakis, in this case, is in itself a sufficient answer to the largely irrelevant comments of Vitebsky.

However, to not leave the readers to question the essence of the paper and its approach, the points of, or lack of, Vitebsky is addressed individually.

Original Brief & Overview of Results.

Initially I like to state that the paper reflects a project description that was addressed by two separate papers (WP), *WP 135* by Granberg and *WP 158* by the author of this paper. Thus to avoid duplication, the issues have been reasonably split by the two papers.

As refers to North America and the Russian Far East in a Northern Sea Route context, the applicability is that of competing regions for identical commodities and demand market. In general, reference is given to *INSROP Working Paper no 145* and the commodities identified therein. The main exports from Canada – US West Coast are coal, forest products, crude oil, grain and fertilisers (potash). For a second source the author also refers to *Lloyds Shipping Economist (LSE) Sep 97* issue page 9.

For demand markets and the impact on Japan, see also *LSE Oct 98* "The land of sinking demand" on Japanese paper mills and wood chip companies. This with regard to the degree of integration, capital concentration and potential risk of adverse freight rates when trying to lift an industrial shipping operation.

It is correctly observed that movements of coal and ore are incorporated in aggregated volumes in table 2 page 8. The reviewer, no wonder, has however missed the volumes of coal both in table 24, Vostochny and table 28, Vanino.

For reference to coal and its applicability as an export commodity from Russia to the Far East and the risk therein the author refers to *LSE Dec 97 " Willingness to assume risk"* –

> **"In short there are relatively few opportunities for those engaged in shipping to become involved with Chinese Independent Power Projects since the size of**

> **the indigenous coal industry coupled with the largest merchant fleet in the world effectively preclude foreign involvement in fuel (coal) supply issues" (page 20).**

For an in depth analysis of the Asian thermal power market the author also refers to Australia as the major producer and exporter beside China and Canada. See among others conclusions put forth at the annual conference of Australian Bureau of Agricultural and Resource Economics (ABARE) *Financial Times 23 March 99.*

Need for More Interpretation & Explanation

The points made on geography suggest to me that Vitebsky have lost the overall view on Russia, and the degree of detail necessary to relate the individual region and its relevance to the NSR within the federal framework. I disagree with Vitebsky on the need for further elaboration on the issues he suggests. As refers to page 5 and "probably", this refers to two related transportation factors, the economies of scale that can be realised for the particular commodity on one hand, and the distance to the demand markets on the other. For a more theoretical approach and visual proof the author refers to *INSROP Working Paper no 77* (Ramsland et.al) page 21 and following. In this context even the most rudimentary knowledge of Russian geography and the demand markets would suffice as a prerequisite.

The theme has also been covered in depth in for the commodities referred to in *INSROP Working Paper no 144.* For the larger picture the author also refers to *International Monetary Fund Working paper no 34* (Grey 1998), that also partly attribute low revenues in the Russian oil sector to the same infrastructure constraints, insufficient export capacity, monopoly control and inefficient refining.

Regional Review.

The legal framework could have been interested to discuss subject to enough cargo base documented and economies of scale to be realised. From the more to the less however, the criteria's to realise the cargo base proved non-existent in terms of location and scale.

Some short comments in terms of legality, as refers to *art 71 litra* l in the *Russian Constitution,* that relates to border guard and issues under defense and security being a federal task.

Related to the use of the NSR, tariffs are centrally determined and thus outside the eventual control of the independent subjects. Although transit through the territorial waters and straits along the NSR are issues to be argued, port calls along the route are not. The are no evidence that the Sakha Republic would be allowed separate control over its territorial waters. What has been suggested is a Joint Stock Arctic Shipping Company for the Republic see *INSROP working paper No 106* section 3 in comment to review. There is no evidence that this would be under separate tariff structure or Sakha flag.

There is no realism in the export from the north of low cost commodities like coal etc. that has a marginal ability to bear tariffs at all, nor to sustain the upgrade to premium ice-classed tonnage (See previous articles mentioned.)

I also refer to table 1 in the *INSROP WP 135* by A. Granberg on the same project. As concerns Yakutia-Sakha from 1985-96 all figures as refers to population, industry, investments, electric power and bituminous coal exhibit a sharp decline. Shipments to one city, "Yakutsk" of 212 000 inhabitants, is in the overall scenario of the NSR at best marginal. For 1997 89.000 tonnes were brought in by sea to Northern Yakutia, by October 1998 only 47.000 tonnes where shipped *(New York Times, 21 Oct 1998).*

Concerning syndication of capital for major projects in Russia to day, the sovereign risk of Russia is the issue and today most shipments must be paid on forehand. No cases have been found for independent projects of some magnitude in the Sakha Republic that has succeeded so far.

Timber is not lost in sight, but the author simply observe that Primorsky and Khabarovsk Krai are at significant better terms what concerns geography on the one hand. On the other that these regions face stiff competition in particular from US Canada West Coast see previous remarks. Further that none of the volumes is even closely related to the NSR, but move on rail over land to South Korea or China, or by vessels to Japan.

The emphasis on diamonds and gold is the proof of the contrary, that the republic economy is skewed to industries with no or marginal interest to shipping. Thus the propensity for the republic authorities to place the NSR on the agenda as a high priority issue vs the federal government is at best likely. This has also been referred to on page 11 "Notable exceptions are key high value, low volume industries that produce gold, diamonds and other essential, but export oriented commodities".

If the reviewer or reader need explicit statements that diamonds and gold is neither shipped by vessel loads nor likely to affect a shipping operation, this has been rectified. To the question whether the Sakha Republic has interest in the NSR it contribution is marginal, but could gain seasonally by a regular operation. The main overall potential is discussed in *INSROP Working Paper no 140, 144 & 145.*

The Lena River in the transport complex thus is negligible in terms of generation of cargoes, reduced by the structure of the export of the more easterly federal subjects.

As refers to the reviewer and Nyeryungri coal this has now been re-classified as low quality observation.

Problem with Figures.

The tables have been numbered, simply omitted by the short time span allowed for presentation of the paper. I agree on the point of categories, and split accordingly. Fishing ports refers to port structures normally within the larger port areas that previously handled fish. Before the break-up of the Former Soviet Union this would imply fish cargoes. Today it indicates total throughput on the seafront, but does not indicate which commodity that in fact could be any, as the sharp decline of the ports have left them to attack any cargo available.

Referring to table 3 on page 10 it should be fairly straightforward, the table heading is Russian total & Key Far Eastern commodities. Russian total to determine the overall value of export, timber, Lumber, cellulose and plywood in absolute

and percentage point to shed light on its importance to overall foreign exchange earnings.

Crude oil, gas and "energy" are missing since the administrative area neither produces nor exports crude oil or natural gas of any significance.

Concerning section 4 under the same heading on accounts receivable by industry sector 1998 the reviewer has completely missed the point. Correctly he observe that "they show a larger number of timber enterprises that metal enterprises, but in the column which represent money timber ranks much lower". He fails to connect it to the main point that is the degree of consolidation, or lack of one in the relevant industries. This is a prerequisite if a capital investment in the magnitude necessary to lift an ice-classified operation of the ground should take place, even only if concerned with a two vessel operation (100 – 120 Million USD).

Gold as refers to "Sakhazoloto" and privatisation, Sakhainvest holds a 5 % minority share.

Further the reviewer refer to grain as a commodity that suddenly appears on page 21, (see table 20 under section 3.2.3). If questioned, the point is more why grain disappear as a commodity from 1994. The answer is straight, that Russia fluctuates as a producer of agricultural products, and thus its import and export.

The reviewer suggests under editorial points an author who does not know Russia or has done original research. In light of the reviewer obviously unfamiliar with one of the most analysed themes of Russia for decades, its grain harvest or lack of it, this is indeed an interesting observation. Coupled with lack of foreign exchange Grain turnover in this case is related to a reduction in imports, that follows the general decline both in consumption and imports from 1991 to 98. From 1991/2 a level 40,3 million tonnes imports, to 2,9 Mt in 1997/8 to CIS & Baltics. One should also note that China is a major exporter of grain (See *Clarkson Research Dry Bulk Trade Outlook 98*), thus for the Far East AA regional supply could most probably be solved by overland imports.

I understand that Vitebsky like most researchers would like the most updated figures and ideally those of tomorrow presented today. The figures available from *Goskomstat* and others were the best obtainable at the time, and shipping and port statistics from *INSROP Working Paper 135* (table 6) were updated, and time series more continuous. This to reflect the relevant period since the independence of Russia, from 1991 to 97. Statistics for 1998 were not available by year-end.

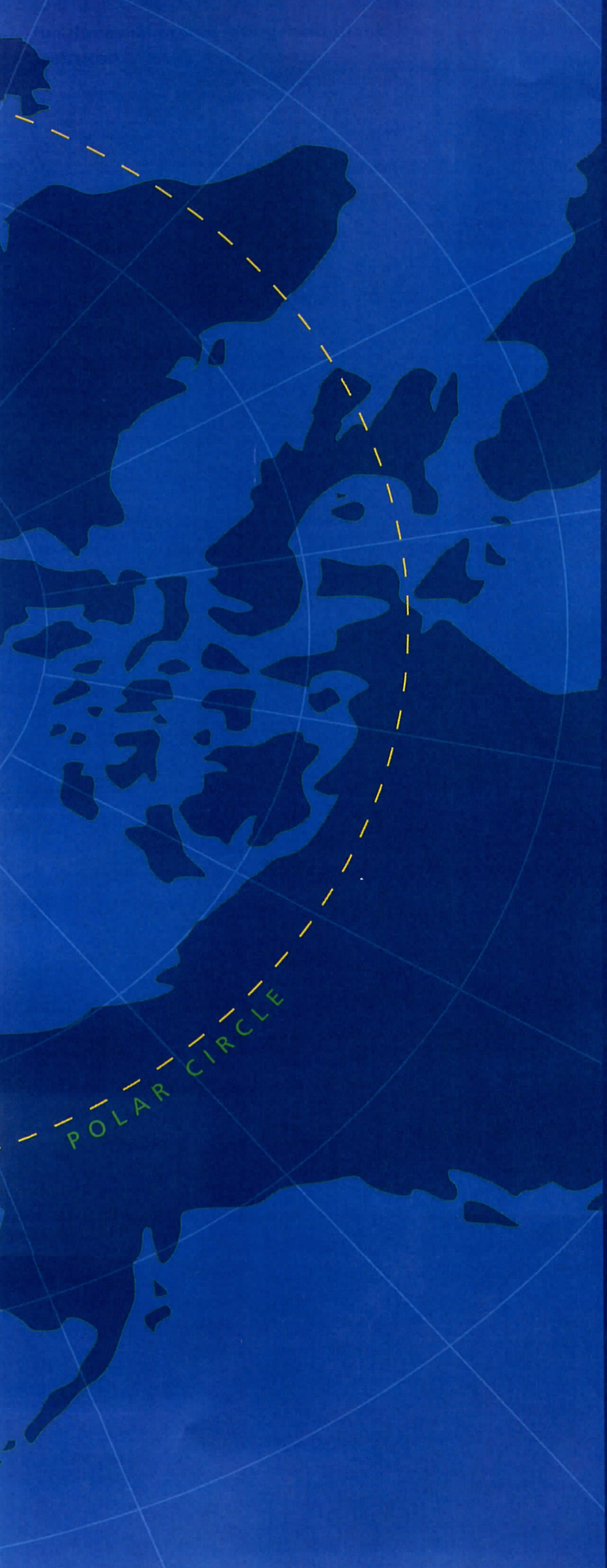
At last I observe that the reviewer has declined to offer sources of his own.

Concluding Remarks.

Some concluding remarks to the reviewer seem proper in light of the comments put forth. I am fully aware of his in -depth project portfolio that covers among other anthropology, religious and psychology issues such as shamanic thinking among natives in Sakha etc. I observe that his faculty is deeply engaged in the Sakha Republic and that the conclusion of the report may be disappointing from that minor or local community angle of view.

From an objective approach to the NSR and whether the Far Eastern Administrative Area could generate significant cargo for the NSR, Tamvakis has the more salient and correct approach.

Trond Ragnvald Ramsland



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 Nippon 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.